DOCUMENT RESUME

ED 452 424 CE 081 717

TITLE	Proceedings of the American Vocational Education Research Association (San Diego, California, December 7-10, 2000).
PUB DATE	2000-12-00
NOTE	151p.; Held at the Annual Meeting of the Association for Career and Technical Education (74th, San Diego, California, December 7-10, 2000).
PUB TYPE	Collected Works - Proceedings (021) -- Reports - Research (143)
EDRS PRICE	MF01/PC07 Plus Postage.
DESCRIPTORS	Academic Aspiration; Agricultural Education; Apprenticeships; Auto Mechanics; Beginning Teachers; *Career Choice; Cultural Influences; *Education Work Relationship; Educational Attitudes; Family Influence; Human Resources; Independent Study; International Education; Management Development; Marketing; Measurement Techniques; Noncollege Bound Students; Office Occupations Education; Postsecondary Education; Preservice Teacher Education; Recruitment; Secondary Education; Special Needs Students; *Student Attitudes; Student Motivation; Student Organizations; Surveys; Teacher Attitudes; *Teacher Education; Teacher Role; Teaching Methods; *Technology Education; Vocational Education
IDENTIFIERS	*American Vocational Education Research Association; Marketing Education; Minnesota; Virginia

ABSTRACT

The following 14 papers, with abstracts and references, are compiled in this conference proceedings: "Exploring the Roles and Duties of Vocational Special Needs Educators" (Melanie Fagert); "Professional Competencies for Provisionally Licensed Career and Technical Education Teachers in Virginia" (Betty Heath-Camp, Daisy L. Stewart and William G. Camp); "Differences Between Faculty and Students' Perception of Recruitment Techniques that Influence Students to Attend Four-year Automotive Programs" (Gregory Belcher and Robert Frisbee); "The Status of Preservice Education in Career and Technology Education" (Thomas H. Bruening, Dennis C. Scanlon and Carol L. Hodes); "A Description of the Occurrence and Impact of Alternate Forms of Assistance Provided to Beginning Agricultural Education Teachers by Minnesota School Districts" (Richard Joerger and Glenn Boettcher); "A Comparison of Diskette and Paper and Pencil Mail-Out Survey Methods for Measuring Self-Directed Learning with the BISL [Bartlett-Kotrlik Inventory of Self-Learning]" (James Bartlett, II); "Factors Influencing A Student's Perception of the Image of a Career and Technical Education Student Organization" (Barry Croom and James Flowers); "Factors Influencing a Student's Perception of the Programs and Services Offered by a Career and Technical Education Student Organization" (Barry Croom and James Flowers); "Vocational Aspirations, Work-related Experiences, and Early Career Choice Patterns of Work-Bound Youth During Early Adolescence" (Jay Rojewski); "Underlying Factors Related to Teaching Effectiveness as Perceived by Apprenticeship Trainers" (Howard Gordon); "Beyond the Success of the Students: Effects of Participation on School-to-Career Partners" (Keith MacAllum and Ivan Charner); "Global Human Resource Development: Cultural Influences on the Delivery of Executive Development Programs" (Bob R. Stewart

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and Tzu-Feng Marlene Lin); and "Teachers in the Future: Retaining Secondary Business and Marketing Education Teachers" (Sheila Ruhland). (KC)

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ED 452 424

American Vocational Education Research Association Research Proceedings at

The Association for Career and Technical Education's 74th Annual Convention

BEST COPY AVAILABLE

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December 7 – 10, 2000

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Exploring the Roles and Duties of Vocational Special Needs Educators

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North Carolina has no specific and justified job description for the Special Populations Coordinators (SPCs) who serve students with special needs enrolled in vocational education. The three purposes for conducting this study were: (a) to identify the level of importance associated with various activities in which vocational special needs educators (VSNEs) engaged; (b) to ascertain the activities in which it was most important for VSNEs to engage; and (c) to gain information that the North Carolina Department of Public Instruction could use to develop a specific and justified job description for SPCs. The theoretical framework for this study was based on the organizational analysis model from the field of training and development. This was a descriptive study in which a questionnaire was completed by experts in VSNE from across the United States and by SPCs from across North Carolina. The data were analyzed to determine the level of importance associated with various activities of VSNEs. The five most important activities of VSNEs were identified as: (a) acting as an advocate for students; (b) communicating with involved parties to ensure coordination of efforts; (c) participating in the development of individualized plans for students; (d) using assessment results to develop individualized plans for students; and (e) providing instruction on employability skills. The researcher concluded that the study findings could be utilized in the development of a specific and justified job description for SPCs. Additional research should be conducted to explore the relationship of the findings to Perkins III programs and funding.

Introduction

Since the passage of the Carl D. Perkins Vocational Education Act of 1984, federal funding has been in place to ensure recruitment and assessment of, and services to, members of special populations enrolled in vocational education courses. Provisions for addressing the needs of members of special populations were included in the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990. In 1994, the School-to-Work Opportunities Act called for school-based learning, work-based learning and connecting activities for all students. Thus, the federal government has repeatedly shown a commitment to addressing the needs of members of special populations who are enrolled in vocational education programs.

The obligation to address the specific needs of members of special populations has fallen on state and local educational agencies. These agencies have employed a wide variety of strategies and mechanisms to meet the needs of members of special populations. However, the common goal of vocational programs for members of special populations has been the promotion of student success (Camden

Career Center, 1991; Gibbs, 1996; Illinois Council of Vocational Educators, 1986; Lowry, 1990; North Carolina Department of Public Instruction (NCDPI), 1997). In fact, during the early 1990s, the Technical Assistance for Special Populations Project (TASPP) of the National Center for Research in Vocational Education recognized programs that provided exemplary services to members of special populations (Burac, 1992; Burac & Yanello, 1992; Matias, Maddy-Bernstein, & Kantenberger, 1995).

North Carolina's Department of Public Instruction (NCDPI) has developed several mechanisms to address the needs of members of special populations enrolled in vocational education. First, NCDPI retained a person to serve as a Special Populations Consultant on the state level. Second, NCDPI developed and has made subsequent revisions to a handbook that provides information about meeting the needs of members of special populations (NCDPI, 1985; NCDPI, 1990; NCDPI, 1998). Finally, NCDPI created the position of Special Populations Coordinator (SPC). SPCs work for local educational agencies to "ensure that members of special populations receive adequate services and job skills training" (NCDPI, 1997, p. 111).

Statement of the Problem

North Carolina's SPCs have a broad framework for providing services to members of special populations. This framework is centered on 5 broad functions which include: (a) outreach and recruitment; (b) assessment/prescription; (c) coordination with other service providers; (d) monitoring access, progress, and success; and (e) annual accountability/planning (NCDPI, 1997). This broad framework is the only description of the job duties of SPCs provided by NCDPI. Thus, NCDPI provides no specific and justified job description for SPCs.

Significance

Gagne and Medsker (1996) pointed out, "performance is enhanced when people have clear performance standards or goals, and when they receive information about their actual performance relative to those criteria" (p. 17). With no specific job description, North Carolina's SPCs have no established standards that they strive to attain. In addition, there are no specific criteria for supervisors to use in the evaluation of their performance. As such, under the model proposed by Gagne and Medsker (1996), the lack of a job description for North Carolina's SPCs likely inhibits their performance.

By using the results of this research to develop a clear and justified job description, the SPCs and their evaluators will have specific performance criteria. Under the model proposed by Gagne and Medsker (1996), this will enhance performance. The consequence of enhanced performance will be improved services to members of special populations enrolled in vocational education classes.

Research Questions

1. Which of the 44 activities of vocational special needs educators listed on the questionnaire were classified as most important (i.e. ranked in the top 25%)?
2. When a cluster analysis was conducted on the responses of the experts, what clusters were revealed?
3. Were there significant differences between the cluster means of experts with public school VSNE teaching experience and those without this experience?

4. Were there significant differences between the cluster means of SPCs considered full-time and their split position counterparts?

Literature Review

The field of vocational special needs education officially came into being in 1963 with the passage of the Vocational Education Act of 1963. Since that time, changes in legislation have precipitated changes in the field as a whole (Phelps, 1984; 1985). During the early years, a great deal of energy went into defining and operationalizing the field (Phillips, 1976). Then, with the passage of the Education for All Handicapped Children Act of 1975 that called for special education and related services in the least restrictive environment, there was a realization that students with disabilities would be enrolling in vocational education programs (Koble, 1978; Tindall, 1978; Weisgerber, 1978). Thus, from 1975 through the early 1980s, the main goal of the field of vocational special needs education was to develop programs to meet the needs of members of special groups (Hobbs, 1976; Phelps & Lutz, 1977; Weisgerber, 1978).

The passage of the Carl D. Perkins Vocational Education Act of 1984 required states and local educational agencies to improve and expand vocational education programs for members of special populations (Davis & Dickens, 1986; NCDPI, 1985). To ensure that appropriate services and programs were provided to members of special populations enrolled in vocational education, the federal government began monitoring activities. The passage of the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990 and the School-to-Work Opportunities Act of 1994 reaffirmed the federal government's commitment to serving members of special populations enrolled in vocational education.

A review of the literature related to vocational special needs education revealed several research and publication themes including: (a) legislation; (b) enrollment trends; (c) barriers to full participation; (d) improvement of programs; (e) identification of quality programs; and (f) duties of vocational special needs personnel. The information gained through the literature review was utilized in the development of the questionnaire and conceptualization of the study.

Theoretical Framework

The theoretical framework for this study is based on the organizational analysis model of Rummler and Brache (1992) and depicted in Figure 1. This model is based on the assertion that organizational performance must be analyzed at three levels in order to understand the factors that are inhibiting or enhancing human performance (Gagne & Medsker, 1996). Thus, as part of the input phase of this study the organization, procedure, and individual were analyzed. At the organizational level, there was a clear understanding of the goal of SPC program which is to "ensure that members of special populations receive adequate services and job skills training" (NCDPI, 1997, p. 111). At the procedure level however, problems arose because there is a broad framework but no specific job description. This in turn results in problems at the individual level because with no clear expectations, SPCs have no clear standards and their supervisors have no way to provide feedback. As a result, the SPCs' performance is inhibited.

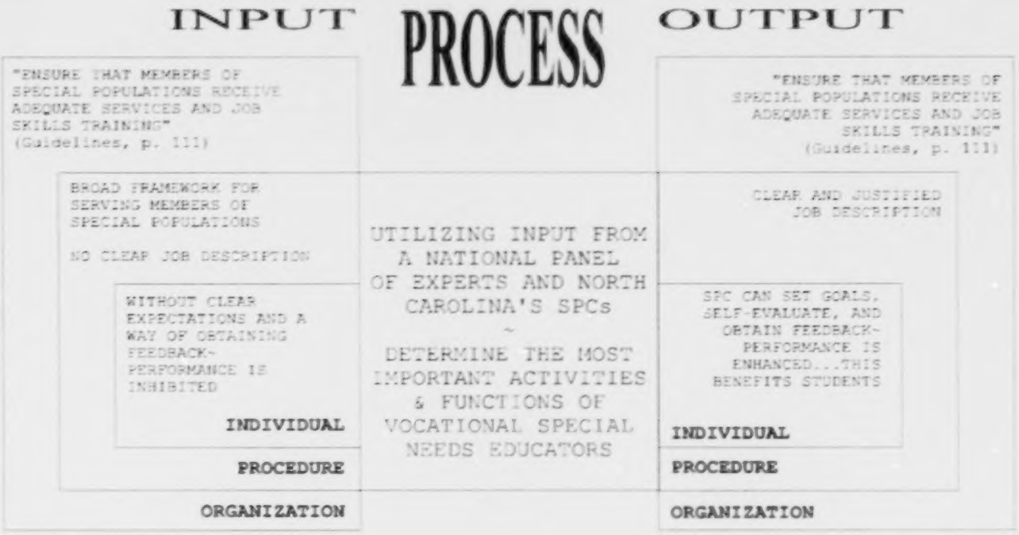
INPUT
PROCESS
OUTPUT
"ENSURE THAT MEMBERS OF SPECIAL POPULATIONS RECEIVE ADEQUATE SERVICES AND JOB SKILLS TRAINING" (Guidelines, p. 111)
BROAD FRAMEWORK FOR SERVING MEMBERS OF SPECIAL POPULATIONS
NO CLEAR JOB DESCRIPTION
WITHOUT CLEAR EXPECTATIONS AND A WAY OF OBTAINING FEEDBACK~ PERFORMANCE IS INHIBITED
INDIVIDUAL
PROCEDURE
ORGANIZATION
UTILIZING INPUT FROM A NATIONAL PANEL OF EXPERTS AND NORTH CAROLINA'S SPCs
~
DETERMINE THE MOST IMPORTANT ACTIVITIES & FUNCTIONS OF VOCATIONAL SPECIAL NEEDS EDUCATORS
"ENSURE THAT MEMBERS OF SPECIAL POPULATIONS RECEIVE ADEQUATE SERVICES AND JOB SKILLS TRAINING" (Guidelines, p. 111)
CLEAR AND JUSTIFIED JOB DESCRIPTION
SPC CAN SET GOALS, SELF-EVALUATE, AND OBTAIN FEEDBACK~ PERFORMANCE IS ENHANCED...THIS BENEFITS STUDENTS
INDIVIDUAL
PROCEDURE
ORGANIZATION

Figure 1. Theoretical framework used in the construction of this study.

Recognizing that the lack of a clear and justified job description was causing problems for SPCs, it became necessary to begin the process phase of this study. During this phase, the study was conducted. The results of this phase were: (a) a determination of the importance associated with various activities in which vocational special needs educators engage; (b) a determination of the activities which were perceived as those in which it was most important for vocational special needs educators to engage; and (c) provision of the information obtained to NCDPI for use in the development of a job description for SPCs.

The output phase of this study was a list of the activities and functions that comprise a clear and justified job description. The problem at the procedure level would be addressed by developing a clear and justified job description. As a result, individual SPCs would be empowered. They could set goals and evaluate their performance relative to these goals. In addition, their supervisors could evaluate their performance and provide feedback. Thus, the entire organization could function at an optimum and "ensure that members of special populations receive adequate services and job skills training" (NCDPI, 1997, p. 111).

Research Methods and Procedures

Participants

This was a descriptive study in which a questionnaire was utilized to collect data from two groups of participants. The first group of participants were SPCs listed in the North Carolina Special Populations Directory (Hendrix-Frye, 1998). This is a comprehensive directory containing information about vocational special needs educators in the state of North Carolina. Of the 267 SPCs listed in the

Directory, 264 had complete contact information listed. As such, these 264 SPCs made up the first group of participants.

The second group of participants was made up of 37 experts in vocational special needs education. The experts were obtained through a snowball sampling process in which an initial person or persons recommend people who were then asked to recommend others (Bogdan & Biklen, 1992). The researcher initiated this process by contacting the persons associated with the TASPP exemplary program research. These people were asked to recommend the people they considered the nation's leading experts in vocational special needs education. These people were contacted and this process continued until there were no new names being generated. At this point, the 34 people who had been nominated as experts by two or more people were asked to serve on the panel. In order to assure experts who were familiar with the North Carolina SPC program, the researcher contacted two administrators from the NCDPI. These two people were asked to nominate the State's leading experts in vocational special needs education who were not employed during the 1997-98 school year as SPCs. Of the nine people nominated as experts, three received two recommendations. As such, these three North Carolinians were asked to serve on the panel of experts. The final result of the nomination process was the construction of a panel of 37 persons with expertise based on experience which Meyer and Booker (1990) referred to as substantive expertise.

Instrumentation

The questionnaire utilized in this study was developed by the researcher and was made up of 14 demographic items, 44 Likert-scale items related to the importance associated with various activities of VSNEs, and two open-ended items. Each of the 44 items in the body of the questionnaire described a specific activity in which VSNEs engaged. In order to identify these activities, the researcher reviewed literature in which the roles and duties of VSNEs were described. These roles and duties were then grouped using a modified version of the affinity process as described in Brassard and Ritter (1994). A pilot study was conducted to establish the content validity and the internal consistency of the questionnaire. A group of people who worked in the area of vocational special needs education but were not employed as SPCs participated in the pilot study. The researcher made minor revisions in the instrument based on the comments of the pilot study participants in an effort to establish content validity. In addition, the researcher calculated the split-half reliability of the instrument and found the questionnaire had a very high degree of internal consistency ($r = +.94$ with correction term).

Data Collection

The questionnaires were mailed to all participants (n=301) accompanied by a cover letter that contained information about the study. All return envelopes had a number in the upper left corner to aid the researcher in tracking returns. Three weeks after the initial mailing to the SPCs, the researcher mailed a follow-up postcard SPCs whose questionnaire had not been received. One month after the initial mailing to the experts, the researcher contacted all experts who, based on the tracking system utilized, had not yet returned the questionnaire. Between the follow-up contacts and the final cutoff the researcher had established, additional questionnaires were received. The responses received (n=210) represented an overall response rate of 69.77% (see Table 1). This response rate failed to meet the 70% threshold that Gay (1987) asserted was necessary for the researcher to be completely satisfied that the conclusions drawn from the research are valid.

Table 1
Participants and Respondents by Group

	Participants	Respondents	Participants Responding
Group	Frequency (Percent)	Frequency (Percent)	Percent
SPCs	264 (87.71%)	176 (83.81%)	66.67%
Experts	37 (12.29%)	34 (16.19%)	91.89%
Total	301 (100.00%)	210 (100.00%)	69.77%

Findings and Implications

Based on their substantive expertise, the experts' responses were analyzed to determine the five most important activities of VSNEs. These activities were: (a) acting as an advocate for students; (b) communicating with involved parties to ensure coordination of efforts; (c) participating in the development of individualized plans for students; (d) using assessment results to develop individualized plans for students; and (e) providing instruction on employability skills. Since these activities were identified as most important, NCDPI should consider the amount of time SPCs spend engaged in these activities when developing of a job description for SPCs.

A cluster analysis enabled the researcher to examine how the items clustered and how the items in each cluster were similar, and/or different (Norusis, 1988). This analysis resulted in the identification of 8 clusters (see Table 2). Cluster analysis of the experts' responses indicated that 2 main clusters under which SPCs' job descriptions should be organized were "communicating" and "conducting career preparation activities."

Table 2
Clusters Identified Through Analysis of Experts' Data

Cluster Number	Cluster Name[1]
1	Resource development
2	Meeting legislative mandates
3	Providing direct instruction
4	Coordinating the program
5	Communicating
6	Providing a modified program
7	Conducting career preparation activities
8	Serving students

[1] Cluster names were developed by the researcher based on cluster characteristics.

A review of the findings showed that experts with vocational special needs teaching experience had a significantly higher cluster mean on "communicating" than their peers without this teaching experience (see Table 3). This would seem to reiterate the importance of this cluster as part of the SPCs job description. It should be noted that as activities related "communicating" and "conducting career preparation activities" are added to the job description, it will be important to determine if others (e.g. transition specialist) are providing these activities in order to reduce duplication of effort.

Table 3
Comparison of Cluster Means of Experts With and Without Public School VSNE Teaching Experience

Cluster Number	Cluster Means for Experts with Public School VSNE Experience (n=18)	Cluster Means for Experts without Public School VSNE Experience (n=16)	F Ratio	Prob>F
1	2.797	2.562	1.1654	.2884
2	2.904	2.589	1.5290	.2253
3	2.556	2.375	0.2441	.6246
4	3.484	3.250	2.1727	.1502
5	3.844	3.638	6.1034	.0190*
6	3.367	3.338	0.0225	.8816
7	3.397	3.294	0.3053	.5844
8	3.211	2.963	1.5321	.2248

* significant at or below α=.05

As shown in Table 4, there was a significant difference between the cluster means of full time SPCs and their split position counterparts on "meeting legislative mandates," "coordinating the program" and "providing a modified program. Overall, the full time SPCs had generally higher cluster means than their peers who worked in split positions. As such, when developing a job description for SPCs it will be necessary to offer recommendations to SPCs who work in split positions so that they are able to prioritize tasks.

Table 4
Comparison of Cluster Means for Split Position and Full Time SPCs

Cluster Number	Cluster Means for SPCs who Failed to Indicate Split or Full Position (n=2)	Cluster Means for Split Position SPCs (n=91)	Cluster Means for Full Time SPCs (n=83)	F Ratio	Prob>F
1	2.500	2.645	2.735	0.5034	.6053
2	3.215	2.997	3.216	3.6218	.0288*
3	2.000	1.681	1.831	0.7337	.4816
4	3.270	3.121	3.329	3.7955	.0244*
5	3.100	3.418	3.511	1.6827	.1889
6	3.200	2.763	3.070	5.0159	.0076*
7	3.715	3.261	3.379	1.7738	.1728
8	3.000	2.945	3.130	2.1196	.1232

* significant at or below α=.05

The perceptions of the experts were significantly different ($p \leq .05$) from the perceptions of the SPCs on 4 clusters. The experts' cluster means were higher on the following clusters: "providing direct instruction"; "communicating"; and "providing a modified program". In contrast, the SPCs cluster mean was higher on the "meeting legislative mandates" cluster. In developing a job description for SPCs, any characteristics unique to North Carolina that could warrant the inclusion of activities related to "meeting legislative mandates" should be considered.

Recommendations

Based on the findings and implications, the researcher was able to offer specific recommendations for the improvement of North Carolina's SPC program. However, the findings and implications also pointed to some areas in which additional research was needed. As such, the researcher made specific recommendations.

Recommendations for Practice

1. It would be advisable to utilize the results of this study to develop an understanding of the position of SPC and then communicate this through a specific and justified job description.
2. The specific activities of SPCs should be related to the broad functions of communication and career development.
3. The decision to add other activities or clusters to the job description should be made in light of the results of this study.

Recommendations for Further Research

1. Additional research into methods for developing through job descriptions will need to be conducted so that a specific and justified job description for SPCs can be developed.
2. Research into consumer (members of special populations and their parents) satisfaction should be conducted while SPCs are operating under the current job description, or lack thereof, and then replicated after SPCs have a specific and justified job description.
3. This study should be replicated in the VSNE programs of other states. In conducting this research, it may be possible to identify states in which VSNEs have perceptions similar to those of the experts. If this does occur, it would be helpful to study the VSNE programs in these states including the VSNEs' job descriptions.
4. With the passage of the Carl D. Perkins Vocational and Applied Technology Act Amendments of 1998 (Perkins III), some programs, including special populations, may suffer reductions in funding (Caruso, 1998). It would be advisable to study the ability of SPCs serving in split positions to effectively carry out the most important activities of VSNEs.
5. Research should be conducted on the roles of, and interaction between, SPCs, career development counselors, secondary special education teachers, and transition personnel in order to reduce duplication of effort. This is especially relevant since Perkins III requires a description of how the law is coordinated with other federal laws related to education.

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Professional Competencies for Provisionally-licensed Career and Technical Education Teachers in Virginia

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Abstract

This study was conducted to determine the professional competencies needed by provisionally-licensed teachers of career and technical education (formerly vocational education) in Virginia. The authors developed, validated, and field-tested a Likert-type scale and surveyed career and technical directors throughout the state. The result was a prioritized list of competencies to be included in curriculum and instruction courses for provisionally-licensed teachers.

The authors found that career and technical directors emphasized:

1. organization and management to create an environment that facilitates learning;
2. classroom delivery strategies that include student-centered instruction as well as teacher-centered instruction;
3. development of curriculum expertise to include integration of academic and career and technical instruction;
4. classroom employability skills in students;
5. formative and summative assessment of student performance; and
6. legal responsibilities and liabilities of a career and technical education teacher.

The results support the competencies identified in past career and technical teacher education studies and taught in many teacher education courses. In addition, career and technical education directors valued new beginning teacher standards from the Interstate New Teacher Assessment and Support Consortium (INTASC) and National Board for Professional Teaching Standards (NBPTS). The results of this study have implications

for content of all professional teacher education courses intended for preparing career and technical education teachers, whether delivered by distance education or in traditional settings and whether intended for traditional or provisionally licensed teachers. Implications for the results of this study extend beyond the state of Virginia to other states and to other nations.

Introduction and Significance of the Study

Professional competencies needed by career and technical education teachers are constantly changing. With technology available to teachers advancing at breakneck speeds and with teacher certification/licensure requirements in a constant state of flux, the need exists to rethink periodically the content of teacher preparation courses. Moreover, with the growing momentum of the teacher education reform movement typified by the promulgation in 1997 of the Interstate New Teacher Assessment and Support Consortium (INTASC) standards for teacher performance (Council of Chief State School Officers, 2000) and the publication of teacher performance standards for national board certification in vocational (career and technical) education (National Board for Professional Teaching Standards (NBPTS), 1997), there is a pressing need to reexamine what we expect of our beginning teachers in general and in particular what we expect of our provisionally-licensed teachers.

In Virginia an increasingly critical shortage of qualified teachers is resulting in large numbers of provisionally-licensed teachers entering the classroom with little or no professional preparation in teaching. An initial phase of this study produced data indicating that at least 100 provisionally-licensed teachers entered career and technical education programs in the state in 1998. The Virginia Department of Education requires that those teachers complete professional preparation in curriculum and instruction during a probationary period in order to receive full professional licensure (Virginia Department of Education, 1998). An analysis of the current career and technical teacher education programs in the state indicated that existing curriculum and instruction courses were neither appropriate nor accessible to those teachers.

The specific intent of this study was to provide a current, validated set of professional competencies needed by career and technical education teachers in the state of Virginia. This study was intended to be used to revise and improve the teacher preparation program in career and technical education in Virginia, with particular emphasis on providing accessible, appropriate professional preparation coursework in curriculum and instruction for provisionally-licensed teachers in the state. The results are being used to develop web-managed, multimedia courses that will be available for self-paced, self-directed study for professional development for those teachers. In addition, this research can serve as a model for other teacher preparation programs in other states and in other nations.

Statement of the Problem

In the landmark "Cotrell studies," researchers at the National Center for Research in Vocational Education identified a comprehensive set of professional competencies for beginning teachers of career and technical education subjects (Cotrell, Cameron, Chase, Doty, Gorman, & Molnar, 1972; Cotrell, Chase, & Molnar, 1972). Since that time, no similar national study has been published for career and technical teacher education as far as the researchers could determine. More specifically, no current database could be found that identifies professional competencies needed by beginning career and technical education teachers in Virginia, for teachers in general, or for provisionally-licensed teachers in particular. The research questions addressed were as follows:

1. What are the professional teacher competencies needed by beginning teachers of career and technical education in Virginia?

2. What is the relative importance of each of the professional teacher competencies identified in question 1?

Theoretical/Conceptual Base

The established theoretical framework that still guides curriculum and instruction in career and technical education in this country is based primarily on the work of David Snedden and Charles Prosser (Doty & Weissman, 1984; Doolittle & Camp, 1999) and dates from the early 1900s. Both Snedden and Prosser were concerned principally with broad political and policy issues and seem to have given little consideration to a learning theory to undergird their vision for career and technical education. Even in his later years, Prosser omitted any mention of a learning theory for career and technical education (Prosser & Allen, 1925). Nevertheless the implicit overarching learning theory underpinning career and technical education since before the Smith Hughes Act, has been behaviorism (Dobbins, 1999). According to Dobbins (1999), within the framework of behaviorist learning theory, Benjamin Bloom's work in mastery learning forms the theoretical framework for competency-based education. In Bloom's model, complex conceptual wholes are broken into smaller parts and overarching skills are broken into sub-skills for teaching, with the explicit contention that almost all students can master almost all learning, if the tasks are subdivided, analyzed, and taught appropriately. In career and technical education, that model translates into "duty areas" being broken into tasks or competencies needed by workers. By extension, using Bloom's model, the professional preparation of career and technical teacher education would be structured by the identification of competencies needed by teachers (Dobbins, 1999).

Related Literature

In 1972, seminal work by Cotrell, et al. (1972) and by Cotrell, Chase, & Molnar (1972) established lists of competencies needed by career and technical education teachers in the United States. In the past decade, major initiatives in general teacher education have been undertaken to specify professional competencies needed by teachers (Council of Chief State School Officers, 2000; National Board for Professional Teaching Standards, 1997).

The American Association of Colleges for Teacher Education (AACTE) advocated (AACTE, 1989) that all states should hold all teaching applicants accountable for a common set of professional standards and assure that beginning teachers meet entry level standards. An AACTE task force (1989) recommended teacher preparation components that included, among other priorities, (a) a specific curriculum designed to provide the beginning teacher with essential knowledge and skills, and (b) competency assessment of subject area and professional knowledge and skills.

Wise and Liebbrand (2000) reported that schools of education seeking accreditation from the National Council for Accreditation of Teacher Education (NCATE) will be expected to focus efforts more specifically on candidate performance than in the past. The NCATE 2000 standards will require that teacher candidates demonstrate mastery not only of content knowledge in their field, but also provide evidence that they can teach effectively.

Lynch, Schmidt, and Asche (1988) conducted a qualitative study, using the Nominal Group Technique, to arrive at a prioritized list of research needs in career and technical education. The top need this study identified was for an agreed-upon structure of competencies, content, and instructional methods.

Lynch (1994) painted a grim picture of the diminishing capacity of colleges and universities to prepare teachers for career and technical and technical education programs. According to Lynch, there had been a significant decline in enrollments in career and technical teacher education in the recent past complicated by a general lack of a clearly focused conceptual framework underlying career and technical teacher education. From the perspective of practicing career and technical education teachers, Lynch reported a lack of a codified professional knowledge base that contains the theory, knowledge, understanding, and skills needed to teach for and about the workplace and the workforce. Two implications cited in the Lynch paper were that increasing numbers of provisionally-licensed teachers could be expected and that existing teacher education programs would be inadequate to meet their needs.

Research Methods and Procedures

A list of professional teaching competencies was developed from a review of the literature including an extensive examination of career and technical education studies that followed Cotrell, et al. (1972) during the 1970s and 1980s. Those were combined with both the INTASC standards and those of the National Board for Professional Teaching Standards. The resulting competency list was submitted for validation to a panel of experts and revised accordingly. A Likert-type scale was provided for respondents to rate the importance of each of the 136 competencies in terms of the importance of including them in courses that are offered for alternative licensure. A few informational items about the school system and career and technical areas offered were also included. The instrument was field tested by practicing professionals in career and technical education other than the Virginia career and technical education directors. Revisions were made based on the outcome of the field test. The survey instrument was mailed to all career and technical education directors in Virginia with a cover letter explaining the study, using the Dillman Total Design Method to guide the data collection effort. An early-late comparison was made to determine if there were any differences in the responses between early and late respondents. The population of the study was all career and technical education directors in the state of Virginia as identified by the Virginia Department of Education, Office of Career and Adult Education Services, a total of 145 subjects. All career and technical education directors were surveyed, so the analysis was treated as a census and only descriptive statistics were computed.

Findings and Conclusions

There were 63 respondents for a response rate of 43.4%. When the early and late responses were compared, no significant difference was found; therefore, we concluded that the responses received were representative of the entire population.

A prioritized list of professional teaching competencies resulted from this study. The competencies were rated on a Likert-type scale in which the following descriptions were used to indicate the importance of teaching that competency in the courses to be developed for provisionally-licensed teachers: 5 = critically important, 4 = very important, 3 = important, 2 = less important, and 1 = not necessary. In an attempt to increase the differentiation among responses, the career and technical education directors were asked to try to rate approximately equal numbers at each of the five levels. Understandably, the results indicated that the respondents found this difficult to achieve, with more competencies being rated with the higher levels of importance. The term "vocational" instead of "career and technical" was used in some items in the instrument because that term was more predominant at the time the survey was conducted. Reported in Table 1 are the 38 competencies reported as most important by having mean ratings above 4.0. For comparison purposes, Table 2 has the 10 competencies that had mean ratings below 3.0, indicating that they were considered by the respondents to be the least critical for provisionally-licensed teachers in career and technical education.

In summarizing the results, we determined that career and technical education directors ranked the following broad categories of competencies as top priorities for professional development of beginning career and technical teachers. Based on this ranking, we concluded that these areas should be emphasized in the initial preservice curriculum and instruction courses:

1. curriculum development expertise to include integration of academic with career and technical curriculum;
2. classroom organization and management to create an environment that facilitates learning;
3. classroom delivery strategies to include a number of student-centered activities as well as teacher-centered instruction;
4. development of employability skills in students;
5. formative and summative assessment of student performance; and
6. legal responsibilities and liabilities of a career and technical education teacher.

Table 1

Competencies Rated Most Important by Career and Technical Education Directors

Rank	Competency	Mean	SD
1	Create a positive learning environment.	4.68	0.62
2	Employ various teaching and learning strategies such as an illustrated lecture, demonstration, questioning, team teaching, cooperative learning, group and panel discussions, symposiums, group processes, projects, student directed study and individualized instruction.	4.58	0.61
3	Carry out a program of safety instruction for students	4.54	0.68
4	Develop a lesson plan.	4.48	0.84
5	Develop employability skills in students.	4.46	0.79
6	Implement a program of study that integrates academic and career and technical concepts and content.	4.46	0.65
7	Develop employability skills in students.	4.46	0.79
8	Implement a program of study that integrates academic and vocational concepts and content.	4.46	0.65
9	Use classroom organization and behavior management to appropriately address discipline problems presented by students with disabilities in regular settings.	4.46	0.81
10	Inform students of objectives prior to instruction.	4.38	0.78
11	Design curriculum and use learning activities that incorporate the Virginia Standards of Learning.	4.34	0.87
12	Develop, inform students, and implement a plan for evaluation and grading.	4.34	0.75
13	Design curriculum and use learning activities that incorporate the Virginia Standards of Learning.	4.34	0.87
14	Use appropriate techniques for assessing learner achievement in all domains.	4.32	0.87
15	Introduce, deliver, and summarize a lesson.	4.32	0.87
16	Select and use motivation and reinforcement techniques.	4.32	0.91
17	Establish student performance criteria using criterion-referenced and norm-referenced assessment.	4.30	0.81
18	Develop a unit plan.	4.30	0.95
19	Plan instruction based upon knowledge of subject matter, students, the community, and curriculum goals, including the use of advisory committees.	4.28	0.81
20	Plan for and use a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.	4.26	0.92

Note. Competencies were rated using a Likert-type scale in which 5 = critically important, 4 = very important, 3 = important, 2 = less important, and 1 = not necessary.

Table 1

Competencies Rated Most Important by Career and Technical Education Directors, continued

Rank	Competency	Mean	SD
21	Plan for and use a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.	4.26	0.92
22	Develop curriculum goals and performance objectives.	4.24	0.96
23	Prepare teacher-made instructional materials.	4.22	0.85
24	Incorporate state and county curriculum objectives into the student's program of study	4.22	0.86
25	Uses individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.	4.20	0.83
26	Create and maintain a classroom environment to enhance pupils' self-esteem and confidence.	4.18	0.96
27	Develop long and short-range program goals and objectives for all pupils, including at-risk, culturally and economically deprived and those with handicapping conditions.	4.16	0.89
28	Establish and implement rules and procedures for student behavior.	4.15	0.97
29	Identify criteria for competency-based vocational/technical education programs.	4.10	0.89
30	Determine student grades and interpret grades and assessment procedures to various audiences.	4.10	0.93
31	Describe the legal responsibilities and liabilities of a vocational teacher.	4.10	0.86
32	Develop a curriculum guide	4.10	0.99
33	Identify and discuss solutions to problems of beginning teachers.	4.08	0.95
34	Plan and implement lessons and strategies that integrate technology to meet the diverse needs of learners in a variety of educational settings.	4.06	0.84
35	Exhibit professional behavior including ethical practices, appropriate relationships with peers and administrators, and membership and participation in professional organizations.	4.04	0.97
36	Plan for and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.	4.04	0.97
37	Plan instruction that maximizes each student's opportunities to accomplish learning goals.	4.04	0.97
38	Arrange facility to be conducive to student learning.	4.02	0.97

Note. Competencies were rated using a Likert-type scale in which 5 = critically important, 4 = very important, 3 = important, 2 = less important, and 1 = not necessary.

Table 2

Competencies Rated Least Important by Career and Technical Education Directors

Rank	Competency	Mean	SD
127	Identify major vocational/technical education legislation and describe the significance and contribution of federal legislation to vocational/technical education.	2.98	1.19
128	Prepare students to use parliamentary procedure.	2.88	1.10
129	Organize and conduct an employer-employee or parent appreciation event.	2.84	1.09
130	Identify roles for vocational/technical teachers in the political process.	2.82	1.24
131	Prepare, conduct, and report findings of a community survey.	2.80	1.01
132	Assist students in balancing work and family roles.	2.80	0.93
133	Provide a rationale for including training and development services as part of the total vocational/technical education program.	2.80	1.26
134	Organize and publicize adult education courses.	2.80	1.26
135	Describe the contributions of leaders in the various vocational/technical programs.	2.78	0.95
136	Identify and describe the major forces that create the need for adult training and development services.	2.58	1.26

Note. Competencies were rated using a Likert-type scale in which 5 = critically important, 4 = very important, 3 = important, 2 = less important, and 1 = not necessary.

Implications

The results of this study support the competencies that are taught in many teacher education courses and the outcomes of past career and technical teacher education studies. In addition, we have incorporated INTASC beginning teacher standards and NCATE standards. The results also provide us with information as to how we should sequence the competencies in our curriculum and instruction courses and the importance that we should place on them. The results of this study have implications for content of all professional teacher education courses delivered for the purpose of preparing career and technical education teachers, whether they are delivered by distance education or in traditional settings. While the study was done in Virginia, the results could provide useful information to teacher educators in other states and nations.

Recommendations

Based on the results of this study, the following recommendations are made.

1. Teacher educators who are concerned with developing professional competencies in beginning provisionally licensed career and technical education teachers in Virginia should use the results of this study in program and course planning.

2. Teacher educators in other states and in other countries who are developing professional competencies for beginning provisionally licensed career and technical education teachers may wish to use the competency list from this study to conduct competency studies in their own geographic areas.
3. Although this study focused on provisionally-licensed beginning career and technical education teachers in Virginia, teacher educators in Virginia and elsewhere may wish to use the initial competency list as a starting point to conduct similar studies for preservice teacher education programs.
4. Teacher educators should periodically conduct studies to update the content that is being taught in their teacher education programs, both for preservice programs and programs designed to serve the unique needs of provisionally-licensed teachers in career and technical education.

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DIFFERENCES BETWEEN FACULTY AND STUDENTS' PERCEPTION OF RECRUITMENT TECHNIQUES THAT INFLUENCE STUDENTS TO ATTEND FOUR-YEAR AUTOMOTIVE PROGRAMS

by

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Abstract

The purpose of this study was to identify the difference between effective recruitment techniques as reported by students within baccalaureate automotive technology programs and the faculty members within these programs. Participants in the study were 382 students (Freshman through Seniors) and 27 faculty members of the eight universities in the United States that offer automotive technology baccalaureate degrees. Items included on the survey came from the review of literature about recruitment. Overall the responses between the faculty and students were similar. Reputation of the automotive program, reputation of the university, campus visits and high school/community college teacher/counselor were within the top five ratings of each group. Student respondents indicated that parent/relatives were more important to them in the recruitment process than what the faculty indicated. The faculty perceived that friends at the university/community college/high school, alumni of the university, articulation or direct transfer from a community college were more important than what students indicated as important to them.

DIFFERENCES BETWEEN FACULTY AND STUDENTS' PERCEPTION OF RECRUITMENT TECHNIQUES THAT INFLUENCE STUDENTS TO ATTEND FOUR-YEAR AUTOMOTIVE PROGRAMS

Introduction

There are few occupations that the growth of technology has not affected. Automotive technology is an occupation that has been and will continue to be affected by changing technology and industry standards. Current automobiles are a challenge to repair because of this advanced technology, but the future automobile will be even more complicated (Riley, 1995). This advanced technology will require automotive technicians to have greater skills and knowledge in this area. This creates the need for individuals who are working in the area of service management to have advanced knowledge and skills as well. Service managers and technicians with advanced technical skills on automobiles are in demand and they anticipate this demand will be greater in the future (Cornish, 1996). Within the automotive area, there is an expected tremendous amount of growth within the next 10-25 years. Cornish and Riley indicated change in this industry will be unbelievable and the rate of global change will continue to accelerate. Speelman and Stein (1993) stated that qualified, well-educated technical personnel are increasingly in demand as technology continues to develop. To meet this demand for these workers, schools need to be preparing individuals in the automotive area. They need enrollment within four-year automotive programs to prepare enough individuals to meet the future demands. Recruitment of students is one aspect to increase enrollment within these programs. To effectively recruit students, knowing why they chose to go to the school that they did is important. In addition, instructors are another component within these four-year automotive programs that play an important role in the recruitment process. It is also important to see if instructors have similar perceptions as students as to the importance of recruitment techniques to ensure that the energies and finances spent on these recruitment techniques are spent wisely.

Is there a need to increase enrollment? There are eight universities in the United States currently offering baccalaureate degrees in Automotive Technology. Each of the automotive department heads at these universities was contacted before this study and they stated that the optimum enrollment for their program was higher than their current enrollment. All department heads indicated a higher demand for their graduates than their programs were currently supplying.

Problem Statement

Recruitment efforts are a major component for enhancing enrollment and faculty play an integral role in the recruitment process in four-year automotive programs. However, we do not know whether the recruitment techniques rated higher by students in baccalaureate automotive programs match what the faculty in these programs perceive as effective recruitment techniques.

Purpose of Study

The purpose of this study was to compare how influential the different recruitment techniques were as perceived by students and faculty within baccalaureate automotive technology programs. Though both two-year and four-year automotive programs are important, this study examined the recruitment techniques that enhanced the student's decision to attend four-year automotive programs.

Identified Factors That Influence Student Enrollment Behavior

From the literature, the following sixteen items that influence enrollment behavior were chosen. An additional item, reputation of automotive program, was added based upon the recommendation of the panel of experts when we were validating the instrument. Recruitment items include: (a) friend(s) at university/community college or high school (b) reading this university's catalog, (c) high school/community college counselor/teacher, (d) parent(s)/relatives, (e) alumni of this university, (f) reputation of automotive program, (g) technology recruitment activities, (h) university recruiters visiting my high school, (i) athletic advisor/coach, (j) admission office at this university, (k) campus visit, (l) reputation of the university, (m) university recruiters visiting my community college, (n) community in which university is located, (o) bulletin board advertising at my previous school, (p) promotional materials (brochures, letters, videos), and (q) articulation or direct transfer from community college.

Friend(s) at university/community college or high school

Litten (1989) notes that prospective students regard currently enrolled students as one of the best sources of information about a school. Hossler, Bean, & Associates (1990) stated that targeting peers for recruitment tends to be one of the most effective means for marketing a program.

Reading this university's catalog

Hossler, Bean, & Associates (1990) identified the schools catalog as one type of publication that may move the prospective student from inquiry to application. Paulsen (1990) reported college publications to be one of the six most preferred information source for both parents and students.

High school/community college counselor/teacher

Teachers (especially technology education or industrial arts teachers) who are alumni have a strong influence (Devier, 1982; Edmunds, 1980; and Isbell & Lovedahl, 1989). These past three studies all found that the number one influence of recruitment into university industrial arts/technology education programs came from high school industrial arts/technology education teachers.

Parent(s)/relatives

Research suggested that parents have a strong effect on a student's choice of colleges (Hossler, Bean & Associates, 1990; Major, 1991; Mitchell, 1994; and Speelman & Stein, 1993). In a study conducted by Mitchell (1994), it was found that parents were ranked second as influencing students not to attend an area technical school. Sander's (1985) study on influences of decisions to attend 4-year mechanical power technology programs found that parents ranked eighth out of 25 influences.

Alumni of this university

Past studies have emphasized that alumni of the university are an important aspect of promotion and recruitment for schools (Devier, 1982; Edmunds, 1980; Hossler, Bean & Associates, 1990; and Isbell & Lovedahl, 1989). Isbell and Lovedahl (1989) found that former students were consistently ranked within the top three recruitment techniques in their study of 169 universities.

Reputation of automotive program

Reputation of the automotive program was not an initial influence that was identified from the literature. Several of the students who were a part of the panel of experts emphasized that the reputation of the automotive program had a strong influence on them attending a four-year automotive program. Based upon this response, the reputation of the automotive program was included in this study.

Technology recruitment activities

Izadi and Toosi (1995) indicated that recruitment activities from the specific technology programs were important to student recruitment. These activities could vary but the specific technology programs were responsible for them.

University recruiters visiting my high school

Hossler, Bean, & Associates (1990) stated that individual visits to high schools by admission personnel were a useful method to recruit students. These visits may also include college days and fairs that are staffed by admission personnel, alumni or qualified volunteers.

Athletic advisor/coach

Izadi & Toosi (1995) identified the athletic advisor/coach as another influence for students attending certain post-secondary education entities. This was one of sixteen influences used in their study.

Admission office at this university

Paulsen (1990) reported that the officers from the admission office were one of the six most preferred information sources. Hossler, Bean, & Associates (1990) stated that individuals within the admissions office played significant role in selling the university and its programs to prospective students.

Campus visit

Research indicates that having prospective students on campus is one of the most effective recruitment tools, (Hossler, Bean & Associates, 1990; Isbell & Lovedahl, 1989; Litten, 1989; Mobley, 1988; Wanat & Bowles, 1992; and Williams, 1993). Wanat and Bowles (1992) found that campus visits were viewed as the most powerful source of information in helping students to make a decision about a school and the most effective recruiting activity used by college admission officers. Hossler, Bean, & Associates (1990) further supported this and stated that the campus visit is the most influential factor for a student in making the decision to enroll in at college or university.

Reputation of the university

The image and/or reputation of an institution can play a key role in the college selection process. Paulsen (1990) described a comprehensive study of 3,000 high school seniors. They were asked to examine and rank by importance a list of 25 institutional characteristics. Among the eight top responses were the general academic reputation and faculty teaching reputation.

University recruiters visiting my community college

Hossler, Bean, and Associates (1990) stated individual visits by admission representatives to community colleges and companies within business and industry can be a useful method for recruiting students. Past studies indicated that a visit either to a college or high school by the university recruiter was an influence to the students attending that university (Williams, 1993; Craft, 1980).

Community in which university is located

When looking at institutional characteristics, Paulsen (1990) indicated that distance between their home and the university was important to students. He also stated that colleges become less attractive to students as the distance from home to college increased. Ihlanfeldt (1980) also stated that university location was one of four characteristics that was of pivotal importance for the student when they decided upon a school to attend.

Bulletin board advertising at my previous school

Izadi & Toosi (1995) identified that bulletin board advertising as an influence to students to attend universities. These bulletin boards could either be located at a community college or high school.

Promotional materials (brochures, letters, videos)

Promotional video tapes have been used to market specific programs to encourage enrollment (Hossler, Bean & Associates, 1990; Owens, 1988, 1989; and Mobley, 1988). Mobley (1988) stated that a student-oriented video tend to raise the general interest of students in technology/vocational classes. He further stated that the development of a video to recruit females into the Industrial Technology program at Southeastern Louisiana University resulted in a 50% increase in female enrollment into the Industrial Technology program.

Written communications can take on varying forms in the area of recruitment. Personalized letters from the university to a prospective student can by effective in recruitment and attainment (Mobley, 1988). Isbell and Lovedahl (1989) recommended in their study that faculty should keep in touch with students who are recommended or inquire about a program. They further stated that interested high school students should be invited, through personalized letters, to visit the department.

Articulation or direct transfer from community college

Articulation between schools or 2+2 or 2+2+2 and school-to-work programs have also worked well as recruitment tools (Bickart, 1991; Isbell & Lovedahl, 1989; and Shaw, 1994). Bickart (1994) recommended that faculty utilize articulation. He stated that partnerships between industry and the K-12 schools would enrich their academic preparation for the study at the university. Shaw's (1994) research of articulation into Industrial Technology programs indicated the importance of using articulation as a tool in recruitment. He stated that involvement in 2+2+2 tech-prep projects should be an important priority of the university. Isbell and Lovedahl's (1989) recommended that faculty should continue to articulate their programs to community and technical schools because these are a valuable resource for transfer students.

Method

Population

The overall population for this study was the eight universities in the United States that offer Automotive Technology baccalaureate degrees. Within this population, there were two sub-populations used for this study. The first sub-population consisted of all Freshman, Sophomores, Juniors and Seniors from each university which totaled 607 students. The second sub-population consisted of all faculty that taught within these four-year automotive program, in which there were 36 individuals.

Instrumentation

The survey instrument used in this study was developed from previously published instruments (Bickart, 1991; Carter & Garigan, 1979; Devier, 1982; Isbell & Lovedahl, 1989; Izadi & Toosi, 1995; Sanders, 1986; Speelman & Stein, 1993; Williams, 1980) and included the seventeen techniques that were identified from these previous studies. The following five-part Likert-type scale was used for students to rate the importance of seventeen recruitment items: 1= not important, 2=slightly important, 3=important, 4=quite important, and 5=very important.

Validity and Reliability

A panel of experts was used to establish content and face validity for the survey. The panel consisted of three four-year automotive faculty, twenty of the four-year automotive students, one admission/recruitment specialist, one technical education faculty, four occupational and adult education faculty. The panel of experts was asked to confirm that the instrument had clearly defined items, make suggested changes to items, offer suggestions for the addition or deletion of items and make comments relevant to the overall format and appearance of the instrument. It was recommended by the students who participated on the panel of experts that an additional item "Reputation of Automotive Program" be added to the instrument.

After revisions were made to the instrument, it was pilot tested with a group of twenty students within the four-year automotive program at Pittsburg State University. To measure internal consistency, a Cronbach's alpha was calculated, resulting in a r = .84.

Procedure

The department chairpersons for each of the eight universities were contacted by telephone by the researchers to request their participation in this study. A packet of instruments were then sent to each department chairperson with instructions on how to administer the instruments. Of the 607 student surveys sent, 383 (63.09%) were returned. Of the 383 student surveys returned, 382 (99.74%) were usable. Of the 36 faculty that were surveyed, 27 were returned and usable (75% response rate).

Results

Overall the faculty rated items on the survey higher than students (Table 1). This indicates that faculty believe that most all of these recruitment techniques as important. Whereas the students overall ratings on recruitment items were lower and a fewer items were rated as important or quite important when compared to the faculty responses.

Several items were similar in ranking between students and faculty. These included: reputation of the automotive program, reputation of the university, campus visits and high school/community college teacher/counselor. These recruitment techniques were within the top five ratings of each group. The recruitment item of reputation of automotive program was rated as most important by both groups. Student respondents indicated that parent/relatives were more important to them in the recruitment process than what the faculty indicated. Faculty perceived that alumni of the university were quite important, whereas the students rated this item as only slightly important. Faculty perceived that friends at the university/community college/high school, and articulation or direct transfer from a community college were more important than what students indicated as important to them.

Table 1. Student and Faculty Responses to the Seventeen Recruitment Techniques.

Recruitment Technique	Student Ranking	Student Response		Faculty Ranking	Faculty Response	
		Mean	St Dev.		Mean	St. Dev.
Reputation of Automotive Program	1	4.39	.98	1	4.78	.42
Reputation of the University	2	3.86	1.25	5	4.11	.89
Campus Visit	3	3.37	1.34	2	4.30	.67
Parent(s)/Relatives	4	3.26	1.41	7	3.85	.92
High School/Comm. College Counselor/Teacher	5	2.95	1.47	4	4.22	.85
Technology Recruitment Activities	6	2.90	1.43	9	3.78	.89
Friends at University/Community College/High School	7	2.83	1.51	3	4.26	.81
Reading University Catalog	8	2.74	1.21	16	2.73	.87
Community in which University is Located	9	2.74	1.46	12	3.30	.78
Promotional Material (Brochures, Letters, Videos)	10	2.60	1.40	10	3.67	.73
Alumni of this University	11	2.51	1.44	6	4.04	.90
Articulation or Direct Transfer from Community College	12	2.29	1.48	8	3.85	.82
Admission Office at This University	13	2.25	1.32	14	2.85	.99
University Recruiters Visiting High School	14	2.29	1.43	13	3.15	.99
University Recruiters Visiting My Community College	15	2.04	1.40	11	3.52	1.12
Bulletin Board Advertising at my Previous School	16	1.90	1.26	14	2.85	.82
Athletic Advisor/Coach	17	1.78	1.14	17	2.15	.99

Scale use was: 1=not important, 2=slightly important, 3=important, 4=quite important, and 5=very important

Conclusions

Four out of the top five ranked items were the same between the student and faculty groups. These four items were: (a) reputation of the automotive program, (b) reputation of the university; (c) campus visit, and (d) high school/community college teacher/counselor. This tends to indicate that faculty currently understand the main techniques which positively influence a student to attend a four-year automotive program.

Although these results are quite similar, we should note that there are differences between what faculty perceive as important student recruitment techniques and what students perceived was important to them. Based upon the higher ranking of items by faculty, it was concluded that faculty deemed most all of the recruitment techniques as important to very important, whereas students had only a few items rated this high. This may indicate that faculty are currently spending more time and effort on recruitment techniques that student perceive as less important.

Faculty perception of the importance of alumni to influence students was quite important, whereas the student perception was quite important. This may indicate that faculty who utilize alumni for recruitment efforts, may be better off in spending their resources in other recruitment areas.

Recommendations

Persons who are involved in Automotive Technology recruitment should become familiar with the findings of this study. In order to enhance student recruitment, specifically for four-year Automotive Technology programs, there are certain areas that these recruiters should focus their time and efforts in. Each of these areas will be discussed individually.

The reputation of the automotive programs can be communicated to the prospective student in several ways. Examples may include: (a) placement statistics printed and made available to the students; (b) ranking of the programs made available to the students; and (c) reputation of the program and career opportunities should be emphasized as faculty visit high schools and share with the high school students.

Recruiters need to remain aware of the influence that parents and relatives have over prospective students. While visiting with prospective students, they also need to be communicating with these parents and relatives.

Campus visits should be included in the recruitment process to enhance students enrolling and attending four-year automotive programs. If program recruiters are not currently using this method for recruitment, it is recommended that they begin such. If this process is currently being used by recruiters, it is recommended that they continue using it.
Faculty that recruit for four-year automotive programs may need to place less emphasis on the alumni of the program, articulation or direct transfer from the community college,

and friends at the university/community college/high school. These same faculty may place more emphasis on the reputation of the university and parent(s)/relatives.

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The Status of Preservice Education in Career and Technology Education

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October 2000

The Status of Preservice Education in Career and Technology Education

Introduction

Many reports mention a need for more and better-prepared teachers in Career and Technology Education (CTE). In addition, according to Camp (1998) there is an unmet demand for CTE teachers in certain areas. The 2000-2001 edition of the US Department of Labor's Occupational Outlook Handbook says that overall, career and technical teaching positions will grow at about 10-20% per year until 2008. If this trend continues over time, it will be increasingly difficult to continue CTE public school programs in some states because of teacher shortages. Moreover, there are many in the profession who are concerned about the quality of the training that future teachers receive. Increasingly the profession is moving toward the integration of academic, vocational and technical education, collaborative learning arrangements, career clusters, contextualized learning, accountability and developing career academics in programs. What is not clear is how these concepts and practices are being taught to future teachers. How many of these new and modified approaches to career technology education are being taught in preservice university programs? Are these efforts systematic or piecemeal? What practical and theoretical models are in place to help facilitate and to teach future educators? How do technological changes impact the preparation for both academic and job skills?

Clearly these pressing issues need to be resolved in order for the profession to move forward. To address these issues, a two-pronged scope of work was undertaken. First, a database was established of the CTE programs nationwide. Secondly, an analysis of data from CTE preservice programs was used to describe characteristics of these programs and the context in which teacher preparation occurs.

Background

Pre-service CTE teacher education is presently characterized as decreasing in capacity (Lynch, 1990), increasing in demand (US Department of Labor, 2000), and changing in focus (State Directors of Vocational Education Task Force on Vocational Technical Teacher Education, 1995; Holder & Pearson, 1996; Lynch, 1997; National Board for Professional Teaching Standards, 1997). There is a feeling that the capacity of universities and four-year colleges to prepare pre-service CTE teachers has decreased significantly over the past ten years in terms of number of institutions with programs, number of teacher educators, student enrollments, and financial subsidies by state vocational education agencies. In addition, more CTE teachers are being certified via an alternative pathway, such as non-baccalaureate postgraduate programs or through a combination of testing, coursework, and credit for work experience.

The demand for CTE teachers is increasing due to the large number of CTE teachers retiring, opportunities for CTE teachers to return to private sector employment, and an increase in new positions in some fields (i.e., agriculture, family and consumer science, technology, business). At the same time, there is a change in the competencies needed by

CTE teachers specifically in areas of school-to-career, youth apprenticeship, integration of academic and occupational skills, articulation of secondary and postsecondary education, and coordination of school-, community- and work-based learning to better link academics and the workplace.

Additionally, recent reports indicate existing discrepancies between teacher preparation, practice, and professional development. The U.S. Department of Education (September 1999) indicates that fewer than 30% of new teachers feel well prepared, indicating discrepancies between teacher preparation and practice. Stasz and Brewer (1999) mention that current academic coursework does not include the full range of skills needed on the job. They found that academic study lacked authentic tasks and, therefore, often failed to teach for transfer regarding important job skills. Increasingly, jobs are found to be increasingly complex and communities have a need for workers who can apply higher-level math skills and specific scientific knowledge in the workplace.

As found in the RAND study (Stasz & Brewer, 1999), traditional preservice program models have developed a population of teachers focused more on their perceived needs than the actual needs of the community. Presently, there is no clear understanding of whether the workplace skills needed by society are being met by traditionally trained CTE teachers. To meet the need for skilled workers in the future, CTE programs will need to be the result of partnerships among schools, communities and business, and the incorporation of current work based skills into the curriculum. Teachers will need to better understand the role of academics in business, industry and community organizations, and how to ensure that their programs remain aligned with needs of the workplace (Phelps, 1998).

The way teachers work also will need to change. Instead of the typically isolated teacher, future CTE teachers will need to work collaboratively with many elements of the education community and in real work settings to develop curriculum that will advance and assess student learning across the curriculum (Finch, Schmidt & Faulkner, 1992; Phelps & Hanley-Mannell, 1997). In addition, CTE programs need to attract more students who are able to learn academic subjects. Thus, employers, students, and teachers must deem the curriculum relevant.

Objectives

The purpose of this study was to describe the status of CTE from the perspective of program chairs at colleges and universities in the US. The overall objectives of this initiative were to:

1. Identify and describe the pedagogical competencies desired within the curriculum of teacher preservice CTE.

2. Identify the status of CTE in areas such as integration.

3. Identify "change" programs and practices that CTE educators can use to strengthen preservice programs.

Methods

The goal of the study was to collect comprehensive baseline data about the status of CTE from program chairs. Survey construction was guided by several reports: Standards for National Board Certification: Vocational Education by the National Board for Professional Teaching Standards (1997), Association for Career and Technical Education Division Report: Trade and Industrial Education (Walker and Zirkle, 2000) and A National Database On Vocational Teacher Education (Lynch, 1990). Three external teacher educators also validated the survey in addition to internal reviewers.

The programmatic survey had six sections: Pedagogical competencies for CTE teachers, CTE Certification Process, Course Delivery, Recent Program Revisions, CTE Program Demographics, and Tracking Information. The importance of the following competencies were measured: workplace readiness, student assessment, career decision making, learning to learn, business skills, managing life roles, social development, collaboration with various segments of the community, as well as the importance of several educational principles.

The Sample

The sample for the programmatic survey was intended to be inclusive and representative of all teacher certification programs. With a goal of producing an accurate listing of who is certifying teachers in the vocational areas, three main information sources were used. Initially, Peterson's Four-Year on-line directory and the NCATE on-line directory were cross-referenced to establish a baseline of institutions offering teacher preparation in vocational areas. Second, a request for listing of contact people for CTE teacher preparation programs in each state, territory, and the District of Columbia was mailed to each state's vocational director. The returns from this request greatly expanded the database. Third, listings from professional associations were used, including the Association for Career and Technical Education, the Marketing Education Association, the American Association for Agriculture Education, the Council on Technology Teacher Education, and the National Association of Industrial and Technical Teacher Educators, and the American Association for Family and Consumer Science. By combining and cross-referencing these three searches and listings, we compiled a comprehensive database that initially had 673 entries of individual program chairs who might be responsible for certifying CTE teachers.

To have the most comprehensive information on the status of CTE teacher preparation, each of these 673 individual program chairs was sent the programmatic survey. The instrument was also available on line. Each survey return was tracked by the database record number. After 4 weeks, a follow up postcard that mentioned the URL for the on-line survey was mailed. A second survey mailing was completed about a month later which increased the overall rate of returns.

More than forty-four percent of the surveys were returned. Of the returns, 227 of these surveys contained information about current CTE teacher preparation programs, 48 indicated that they did not offer a CTE teacher certification program, 15 programs had been suspended or discontinued, and two indicated that they were too new to give us any data. Ten percent of the nonrespondents were survey by phone and or e-mail and it was determined that there was no difference between non-respondents and respondents.

Data Analysis

Survey returns were entered into SPSS for analysis. The on-line surveys were collected in a FileMaker Pro database prior to being entered into SPSS. The data are primarily Likert scale data and categorical data. Measures of central tendency and percentages were used for most of the survey items. Numbers in the tables and charts may not add up to 100% due to rounding.

Results

Models Used For Teacher Certification

The primary model for most CTE certification areas is based on a baccalaureate degree in the given certification area. Clearly, the primary method leading to certification is the baccalaureate model as seen in Table 1. Most certification areas use a post baccalaureate certification program as their secondary model. Lynch (1998) mentions that two areas require significant experience in the field. Trade-Industrial areas place the most importance on specific occupational competency to acquire teacher certification. In the present study, only 31 of the 47 Trade and Industrial programs (66%) reported that a BS degree was their primary path to certification. Nine of the 29 programs reported that use of a secondary certification model required a combination of testing, course work, and competency to receive a teaching certificate. The only certification area that appears to be an outlier is Health Occupations. In Health Occupations, the majority of students are not receiving their baccalaureate degree along with teaching certification, as the teaching certificate often requires several years of occupational experience, which was mentioned. by three of the seven institutions reporting a secondary model. Please note that the number of cases responding in this area is by far the lowest reported in the study.

Table 1. Models used for teacher certification: percent of reported cases

Certification Area	Baccalaureate Leads to Certification		Secondary Model for Certification	
Agriculture	90.9%	60/66 cases	28.6%	Post BS cert, 8/28 cases
Business	82.4%	42/51 cases	40.0%	Post BS cert, 10/25 cases
FCS	89.7%	70/78 cases	45.8%	Post BS cert, 11/24 cases

Marketing	94.4%	17/18 cases	27.3%	BS with certification area as a minor, 3/11 cases
			27.3%	Post BS cert , 3/11 cases
Technical Education	87.9%	29/33 cases	40.0%	BS, 4/10 cases
Trade and Industrial	66.0%	31/47 cases	31.0%	Tests+courses+occ. competency, 9/29 cases
Health Occupations	37.5%	3/8 cases	42.9%	Tests+courses+occ. experience, 3/7 cases

Curriculum in CTE Teacher Preparation -- Changing Competencies

The basic competencies were derived from previous NCRVE documents and are reflected in the items 1-38 in the instrument. To the respondents credit they indicated that the highest rated competency area was "designing meaningful instructional tasks based on the real world problems," as shown in Table 2. Second position was, "advancing student learning." Both of these responses indicated a clear strong commitment to meet the needs of student learning. Other competency areas that rated high were technology use, teamwork skills, staying abreast of change and leadership skills. Respondents rated all but eleven competency areas as important or higher. Of those items that ranked in the lowest quadrant, "Assessing students based on occupational standards" and "Identifying career paths, often thought to be a motivator for specific skill acquisition," were two competencies that many would predict that would rank higher.

At least seven of the Likert scale items measured the importance of student assessment in teacher prep programs. Assessment is considered a skill important for CTE teachers (Phelps & Hanley-Maxwell, 1997). Teachers must be able to monitor and assess their students' career interests, aptitudes, informal work, and academic skills using various assessment instruments and techniques. Other highly rated skills are the "soft" skills deemed critical to success in the workplace: teamwork, leadership, and working with people from diverse backgrounds. The ability to work collaboratively with businesses and colleagues also is considered important. The present study reports that assessing student aptitudes and assessing students based on occupational standards had the lower means (3.68 and 3.76 respectively) indicating that they are not emphasized in teacher prep programs. The other assessment areas were higher.

Table 2. Means and standard deviations of perceived importance of competency areas in career and technology education programs.

Competency Area	**N**	**SD**	**Mean**
Designing meaningful instructional tasks based on real world problems	225	.55	4.72
Advancing student learning	224	.55	4.66

Technology use	224	.55	4.64
Teamwork skills	225	.60	4.54
Staying abreast of change	226	.65	4.53
Leadership skills	225	.70	4.48
Integration of academic areas & vocational education	226	.70	4.44
Working with people from diverse backgrounds	227	.63	4.41
Lifelong learning	226	.76	4.41
Human relations	225	.62	4.40
Collaborative partnership with business and other industries	226	.74	4.37
Using authentic assessment	222	.85	4.36
Collaborative partnerships with other faculty	226	.74	4.24
Adapting programs for special needs students	204	.75	4.19
Using assessment as an analytical tool for students	222	.75	4.18
Coordination of school and work-based learning	226	.78	4.17
Creating psychologically safe classrooms	223	.89	4.13
Developing coping skills	226	.79	4.11
Safety Education	216	.96	4.11
Academic support	219	.75	4.09

Table 2. Means and standard deviations of perceived importance of competency areas in career and technology education programs (*Table 2 continued*).

Competency Area	**N**	**SD**	**Mean**
Assessing students in a work context	224	.84	4.07
Articulation of secondary and post-secondary learning	227	.80	4.06
Community partnerships	224	.80	4.02
Collaborative partnership with families	227	.88	3.97
Understanding social and cultural norms	226	.84	3.94
Simulating workplace environments	223	.93	3.92
Collaborative partnerships with other educational intuitions	220	.78	3.92
Identifying career paths	225	.87	3.80
Entrepreneurship	224	.85	3.79
Assessing students based on occupational standards	212	1.02	3.76
Preparing for a larger role in communities	226	.86	3.73
Assessing student aptitudes	224	.97	3.68
Understanding labor trends and projections	225	.93	3.65
Family partnerships	225	.91	3.65
Preparing to manage personal finances	227	1.03	3.62

Scale: 5 = Very Important, 4 = Important, 3 = Somewhat Important, 2 = Low Importance, 1 = Not At All Important.

Instructional Models

The traditional model of developing new teachers is the prevailing model still being used in the preparation of CTE as shown in Table 3. Increased levels of integration are being used frequently but less than 50% of the time. Integration as a concept, is not a new idea to CTE. The respondents in this study indicate that it is not being used to the extent that most would expect after more than ten years of intensive national programming efforts. In 1986, the Holmes Group introduced the concept of the Professional Development School as a national model for the development of teachers. The major goal of a Professional Development School is to improve preparation of teachers through an increased proportion of field based experience through collaborative partnerships with school districts and the teacher certification programs. Talented and exceptional teachers partnered with university professors to train teachers and connect with schools of education. This study found that Professional Development School Model is used at less than half the institutions with any regularity. Forty-one or 18% of 227 programs indicated that they used the Professional Development School Model all the time. Sixty-six programs (29%) use the PDS model some of the time. If the PDS model is encouraged, perhaps institutions need to know the benefits of this model and how to implement such a model.

Table 3. Means and standard deviations of perceived use of instructional approaches by instructors/professors in program certification for CTE.

Approaches/Method	**N**	**SD**	**Mean**
Traditional approach: lecture and laboratory with typical student teaching semester or quarter	215	.91	3.18
Higher levels of math, science, and writing are integrated into the certification curriculum	217	.84	2.77
50% traditional approach and 50% integration approach	212	.89	2.62
Professional development school approach (more than 50% of total student time spent in field-based study and practice	215	1.07	2.43

Scale: 4 = Used All the Time, 3 = Used Infrequently, 2 = Used Some of the Time, 1 = Almost Never Used

Reform Movement

According to the respondents educational reform movement caused significant changes in curriculum as seen in Table 4. Preservice education, teaching methods and pre-service education were reported to have changed significantly -- compared to no change or little change. In adult education and inservice education, respondents indicated that the reform movement caused little change. The changes occurring in higher education are more pronounced in the development of new teachers than working with experienced teachers. This finding is not surprising as most teacher education programs focus on the development of new teachers.

Table 4. Frequency of perceived level of changes in program areas due to educational reform movements

Program Area	No Change		Changed Little		Changed Significantly		Total	
	N	%	N	%	N	%	N	%
Curriculum change	10	4.4	66	29.1	142	62.6	218	96.0
Teaching method	16	7.0	92	40.5	108	50.0	216	95.2
Adult education	71	31.3	91	40.1	34	15.0	196	86.4
In-service education	33	14.5	99	43.6	67	29.5	199	87.6
Pre-service education	24	10.6	82	36.1	100	44.1	206	90.8

Conclusions

Beyond the name change, Career and Technology Education is changing in a number of significant ways. In the area of competency, program chairs believed that making their students' effective in solving problems is a rewarding and useful purpose for CTE education. Surprisingly, career paths, understanding labor trends and projections, and assessing students based on occupational standards were competency areas that did not rate very high with these respondents. Perhaps these areas are not as well understood or they are not as well developed in the literature or by educational programmers.

While the primary method used to teach and deliver the educational program is still the traditional lecture and student teaching approach, newer methods such as the professional development school have started to make an impact on the profession. Unfortunately, higher levels of integration are not commonly being used by the profession. Until higher education begins to use the integration model as one of the primary models of delivery, it is unlikely that secondary teachers will ever fully embrace this approach.

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A DESCRIPTION OF THE OCCURRENCE AND IMPACT OF ALTERNATE FORMS OF ASSISTANCE PROVIDED TO BEGINNING AGRICULTURAL EDUCATION TEACHERS BY MINNESOTA SCHOOL DISTRICTS

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Abstract

Between 1993 and 1995, 6.1% of United States public school teachers left the teaching profession. Of those who left, only 3 out of 10 left for retirement (U.S. Department of Education, 1999). Researchers report that new teachers often experienced difficulty with classroom management and discipline, student motivation, room and lesson organization, locating adequate teaching materials, and understanding complex school systems (Veenman, 1984; Odell, 1986; Griffen, 1985). Thoughtfully designed induction programs appear to be one solution to retaining quality teachers. Beginning teachers involved in induction programs improve in self-confidence and classroom management, lesson planning, and discipline (Connor, 1984; Eisner, 1984). Heath-Camp and Camp (1992) reported that availability of instructional materials, parental support, and feedback from principals were forms of assistance that had a major impact on beginning vocational education teachers from across the United States. Using the questionnaire developed by Heath-Camp and Camp, this study sought to determine the impact and occurrence of selected forms of assistance provided by local school districts to beginning Minnesota agricultural education teachers. Parental support for the program, adequate materials,

textbooks, and workbooks, and available planning time before school started were perceived as the forms of assistance that furnished the greatest impact. The most frequently reported forms of assistance were an orientation on school policies, planning time before school, parental support, and a new teacher workshop. Results of the study may be used to inform the practices of the cooperating school administrators, teacher induction program leaders, teacher educators, and state supervisory staff involved in the program.

A DESCRIPTION OF THE OCCURRENCE AND IMPACT OF ALTERNATE FORMS OF ASSISTANCE PROVIDED TO BEGINNING AGRICULTURAL EDUCATION TEACHERS BY MINNESOTA SCHOOL DISTRICTS

INTRODUCTION AND THEORETICAL FRAMEWORK

The retention of quality teachers in the public school systems has been a topic of continuing concern. Between 1993 and 1995, 6.1% of United States public school teachers left the teaching profession. Of those who left, only 3 out of 10 left for retirement (U.S. Department of Education, 1999). Nearly one-half of all teachers leave teaching before the end of their sixth year of teaching (Jensen, 1986; Curtis, 1985).

According to Schulman (1987), the first-year practitioner is often expected to perform at the same level as his or her experienced colleagues. This pressure results in a transition from student to first-year teacher has been referred to as "reality shock" (Marso and Pigge, 1987). Researchers within and outside of career and technical education have investigated an array of issues, experiences, concerns, preferences, and practices of beginning teachers. For example, researchers found that new teachers often experienced difficulty with classroom management and discipline, student motivation, room and lesson organization, locating adequate teaching materials, and understanding complex school systems. (Veenman, 1984; Odell, 1986; Griffen, 1985).

Heath-Camp and Camp (1992) conducted a national study of beginning career and technical education teachers selected from each of the major service areas to learn about the needs and experiences of beginning career and technical education teachers. The findings were used to inform the development of a framework for teacher induction programs for beginning career and technical education teachers. They reported that many secondary schools did provide support activities for the beginning teachers. However, nearly 25% of the beginning teachers were not given a curriculum guide and 25% were never observed or visited by the principal during their entire first year of teaching. They found that availability of instructional materials, parental support, and feedback from principals were forms of assistance that had a major impact on the beginning vocational education teachers. The beginning vocational education teachers also indicated they experienced moderate to high levels of stress and moderate to low levels of satisfaction with teaching. In case studies of three beginning agricultural education teachers, Talbert, Camp, & Heath-Camp (1994) found the important problems included student discipline, advising the FFA chapter, preparing for multiple classes, managing the laboratory, ordering supplies, time management, lesson planning, and classroom/laboratory management.

Many of the problems experienced by beginning teachers may correspond to particular stages of different models of teacher development. Fuller and Bown (1975) suggest teachers progress through three stages of development in a non-linear manner. The stages are survival, teacher situation concerns, and pupil concerns. Furlong and Maynard (1995) have further proposed a five-stage model: early idealism, personal survival, dealing with difficulties, hitting a plateau, and moving on.

To increase retention and improve instruction during the various induction stages, researchers and experienced program planners recommend carefully planned induction programs that are informed by a comprehensive framework and program goals (Heath-Camp & Camp, 1992; Huling-Austin, 1990; Odell, 1986). Research findings from studies of carefully planned teacher induction programs reflect important benefits. Beginning teachers enrolled in induction programs improve in self-confidence and classroom management, lesson planning, and discipline (Connor, 1984; Eisner, 1984). Teachers involved in induction programs also have more positive attitudes toward teaching and plan to stay in the profession longer than those not involved in induction programs (Henry, 1988; Odell & Ferraro, 1992; Varah, Theune, & Parker, 1986).

Given the combination of beginning teacher experiences along with documented benefits, a teacher induction project for beginning agricultural education teachers was developed by the Minnesota Department of Children, Families, and Learning; the Minnesota Association of Agricultural Educators; and faculty from the Division of Agricultural, Food, and Environmental Education at the University of Minnesota. Leaders of the teacher induction project agreed that current data from a timely assessment would provide the information needed for more effective planning and subsequent delivery of instruction by senior mentors and presenters of earlier planned in-service workshops.

PURPOSE AND OBJECTIVES

The purpose of this study was to determine the nature and occurrence of local assistance provided by school districts to beginning agricultural education teachers in Minnesota. The objectives of the study were to: (a) describe selected demographic characteristics of the beginning agricultural education teachers; (b) describe the nature, impact, and occurrence of the assistance provided by local school districts; and (c) describe the perceived levels of stress and job satisfaction.

PROCEDURES

The population of this descriptive census study consisted of 24 self-selected beginning secondary agricultural education teachers who participated in the Minnesota Agricultural Education Teacher Induction Project. The beginning teachers in this study were the 23 newly hired teachers without teaching experience and one teacher with one year of experience who desired to be in the program. Usable instruments were returned by 23 (95.8%) teachers.

The research instrument consisted of a three-part questionnaire developed and tested by Heath-Camp and Camp (1992). For listed items in the 'form of assistance' section, the participants indicated whether the event had occurred (yes/no). The participants responded to the perceived impact, or affect, of each event by circling the appropriate response of a five point Likert-type scale. Face and content validity were established by researchers and participants of a nominal group technique procedure implemented by the instrument developers. The coefficients of internal consistency for the OCCURRED and

IMPACT scales as determined by Cronbach's Alpha analysis procedures were .74 and .88, respectively.

The questionnaire was distributed and administered in-person by the researchers to the beginning agricultural education teachers at a fall in-service teacher induction project workshop. Instruments were faxed or sent to participants who were unable to attend but agreed to participate in the study. The data were analyzed using version 7.0 of Microsoft© EXCEL™.

FINDINGS

Objective 1 Describe selected demographic characteristics of the beginning agricultural education teachers.

The mean age of the 23 Caucasian teachers was 26.0 (SD=5.79) years. The cohort of was made up of 57% (n= 13) females. The average length of contracts for the full-time teachers was 10.3 months (SD= 1.06). The average salary for full-time instructors was $29,072 (SD= $2240). Ninety five percent (n= 22) and 17% (n=4) of teachers taught in Minnesota high schools and middle schools, respectively. The teachers taught in schools with the following student populations: less than 250 students (26%; n=6), 251 - 499 (35%; n=8), 500 - 999 (26%; n=6), 1000 - 1999 (9%; n=2), and over 2000 (13%; n=3).

Ninety-one percent (n=21) of teachers taught students in grade 10-12. Thirteen percent (n=3), 26% (n=6), and 78% (n=18) of teachers taught students in grades 7, 8, and 9, respectively. All (n= 23) teachers taught agricultural education courses. Thirty-five percent (n=8) taught a course or courses in biology or industrial technology education.

The mean time for formal classroom instruction was 22.87 (SD=7.16) hours per week. Planning, grading papers, and other teaching roles accounted for 17.67 (SD=8.86) hours. Working with the FFA officers and members, and other FFA committees occupied 6.82 (SD=6.26) hours. Supervision of student work experience beyond regular school hours required a weekly investment of 1.35 (SD=2.14) hours. Thirty-five percent (n=8) of the beginning agricultural education teachers reported they were involved in a beginning teacher assistance program sponsored by their local school district.

Objective 2 Describe the nature, impact and occurrence of the assistance provided to beginning agricultural education teachers by local school districts.

Examination of the data in Table 1 indicates that parental support for the program, adequate materials, textbooks, and workbooks, and available planning time before school started were perceived as the top three forms of assistance received in terms of impact. The four most frequently reported forms of assistance were an orientation on school policies, planning time before school, parental support, and a new teacher workshop. Of the thirteen items rated as major or critical (impact = 2.50 or higher), eight were reported to have occurred by over half of the respondents. The extra planning period for beginning teachers was viewed by the cohort of beginning teachers to have a potential major impact, although it was reported and experienced by only 9% of the respondents.

Table 1 Forms of assistance reported by beginning agricultural education teachers.

	Impact[1]		Percent
Forms of Assistance	M	SD	Occurrence[2]
My students' parents provide support for my program	3.22	0.67	82
Adequate materials, textbooks, and workbooks are provided	3.14	0.83	65
Planning time was available before school started	3.13	0.97	87
Information on purchasing supplies/equipment is provided	2.87	1.06	52
Curriculum guides are available for my program area	2.86	1.17	43
Extra planning period is provided for beginning teachers	2.86	1.17	9
My principal provided helpful evaluation and feedback	2.73	1.16	55
Clerical support is provided for beginning teachers	2.73	0.98	35
A list of available resources and vendors was provided	2.71	1.10	30
A mentor or buddy teacher provided	2.65	1.03	57
An orientation tour of school facilities was given	2.61	1.20	61
An in-service on classroom management was provided	2.59	1.10	17
A workshop for new teachers was held	2.55	0.96	78
An orientation on school policies was given	2.48	0.99	91
Time is available to observe other teachers teaching	2.48	1.08	22
A teacher's aid is provided to beginning teachers	2.45	1.37	9
An in-service on time and stress management was provided	2.41	1.10	9
A beginning teachers' handbook was provided	2.32	1.21	43
An in-service on counseling students was provided	2.14	1.04	4
Extra duties (bus, etc.) reduced for beginning teachers	2.13	1.32	26
A Vocational Student Organization orientation was held	2.09	1.41	0
An in-service to explain the curriculum was provided	1.95	1.36	4

Note: [1] Impact Scale: 0 = None, 1 = Minor, 2 = Moderate, 3 = Major, 4 = Critical.
[2] Percent Occurrence = (number of teachers / total number of teachers) * 100

Considering a score between 1.50 – 2.49 reflects a moderate impact, a comparison of the columns of data shows that assistance items rated as moderate impact were also the least frequently reported. Of the nine moderate impact items, eight were reported to have occurred by less than half of the respondents.

Objective 3 Describe the perceptions of the beginning agricultural education teachers relating to their levels of stress and satisfaction with their jobs.

Teachers indicated their responses by circling numbers on 7- point Likert-type scales. The mean score of 4.26 (SD=1.66) on the satisfaction scale (0=very unsatisfied and 7=very satisfied) indicates the beginning teachers were moderately satisfied with their teaching experience after the first seven to eight weeks of the fall term. The mean score of 5.22 (SD=1.17) on the seven point Likert-type stress scale (0=low stress and 7=very high stress) indicated their perceived level of stress was high.

CONCLUSIONS/RECOMMENDATIONS/IMPLICATIONS

This study used an instrument developed by Heath-Camp and Camp (1992) to describe the nature, frequency of occurrence, and impact of selected forms of assistance provided by school district personnel to beginning Minnesota agricultural education teachers. The initial findings from the Heath-Camp and Camp study were derived from data gathered from beginning career and technology teachers from each of the major service areas including agricultural education. General comparisons between the findings of the two studies are made in the following section because of the use of the same instrument and the general nature of the beginning agricultural and career and technology education teacher participants from the students. The reader is cautioned to exercise caution when comparing the studies, however, since the populations of the studies are, indeed, different.

The cohort of beginning agriculture education teachers of this study included a slightly higher percentage of females (57%) than the 1992 beginning vocational teacher study done by Heath-Camp and Camp (49%). The amount of time expended for in-school teaching activities was similar to the amount of time planning lessons and grading papers for the beginning teachers. The proportion (35%) of the teachers involved in a local beginning teacher assistance program was slightly higher than the 25% reported by Heath-Camp and Camp (1992), but lower than the 65% reported by the U.S. Department of Education (1999).

The forms of assistance provided by local school districts had a moderate to major perceived impact on the beginning teachers. The forms of assistance that had a major impact upon the teaching of the beginning agricultural education teachers were: (a) my students' parents provide support for my program; (b) adequate materials, textbooks, and workbooks are provided; (c) planning time was available before school started; (d) information on purchasing supplies/equipment is provided; (e) curriculum guides are available for my program area; (f) extra planning period is provided for beginning teachers; and (g) my principal provided helpful evaluation and feedback. The respondents of this study, however, listed 'parent support' and 'mentor teachers' as items with a higher perceived impact than respondents in the Heath-Camp and Camp study.

Beginning teachers believe having an extra instructional period for planning instruction would have a major impact on their teaching.

before school started; (b) my students' parents provide support for my program; (c) a workshop for new teachers was held; (d) adequate materials, textbooks, and workbooks are provided; and (e) and orientation tour of the school facilities was provided.

The respondents of this October study indicated they experienced a slightly higher level of stress and lower level of job satisfaction than reported in Heath-Camp and Camp (1992) study which was completed in April. The differences may be partially accounted for by the differing amounts of time the respective respondents had spent as beginning teachers. It also may be that this cohort of beginning agricultural education teachers had differing teaching roles and expectations than the sample of teachers from all service areas within career and technical education studied by Heath-Camp and Camp.

Based on the research findings and conclusions, the researchers offer the following recommendations for research and practice. First, results of this study needs to be disseminated to the principals, mentors, teacher educators, beginning teachers, and state staff that are working with this cohort of beginning agricultural education teachers. Secondly, teacher educators should share these findings with preservice teachers so they aware of the types of assistance they will likely need to experience if they are to have a productive and satisfying beginning teaching experience. Thirdly, school district personnel including the administration and human resource professionals need to take appropriate measures to provide for the preferred forms of assistance (e.g., active mentors, instructional materials and supplies, etc.) desired by the beginning agricultural education teacher of their school.

Investigations must continue and involve subsequent cohorts of beginning Minnesota agricultural education teachers to determine if the stated forms of assistance have the same impact as perceived by cohorts of this study. Likewise, researchers need to determine how the impact of selected forms of assistance change as the beginning teachers progress through the initial periods of the induction process. And finally, researchers need to compare the impacts of different forms of assistance of agricultural education teachers with other beginning agricultural and career and technical education teachers in order to determine if their needs are independent of the program.

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A Comparison of Diskette and Paper and Pencil Mail-Out Survey Methods for Measuring Self-Directed Learning with the BISL

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Abstract

This study compared data collection using two mail-out survey methods when examining self-directed learning with the Bartlett-Kotrlik Inventory of Self-Learning (BISL). Diskette and traditional/paper and pencil survey methods were compared. A sample of 1080 business educators was selected to participate in this study. Diskette surveys were sent to 540 business teachers and paper and pencil surveys were sent to 540 business teachers. Both groups received the initial survey (traditional or diskette) and cover letter, one week following the initial mailing a follow-up postcard was sent, a follow-up letter and survey (traditional or diskette) was sent two weeks following the initial mailing, and a phone follow-up to non-respondents was conducted at the end of the third week. Within the two groups, the diskette method yielded a lower response rate than the traditional paper and pencil mail-survey method. Chi-Square and t-tests were used to analyze the demographics. This study showed that there were significant differences among the marital status, years teaching, and salary of teachers. The response differences were examined by comparing the overall BISL score and the sub-scales. The t-tests did not reveal a significant difference between the two groups on the overall BISL score. The sub-scale score on the peer learning construct of the BISL was the only sub-scale that was significantly different between the two groups. This study supports prior research that electronic data collection techniques yield lower response rates. The study also provides evidence that responses between the two survey methods are not similar.

Introduction

Often surveys are conducted to collect data because they are the only means available. More specifically, the mail-out survey method may be used because of advantages such as cost savings, convenience, time, anonymity, and reduction of interview bias (Rea & Parker, 1997). However, this method provides challenges to the researcher. Mail-out questionnaires, when compared to other methods, have lower response rates that can cause concerns about the data being representative of the population. If the research follows a rigorous data collection method, such as Dillman's total design method, the process of data collection can be time consuming (Dillman, 1978). This methodology can also create a concern about bias in the sample, with individuals self-selecting to participate (Rea & Parker, 1997). Still with these concerns, mail-out survey methodology is one of the most widely used methods to collect data from samples and make inferences to populations.

Technology is continuously evolving and shifting how business and education are functioning. Within business education researchers have integrated technology within the survey methodology (Bartlett & Kotrlik, 1999; Truell, 1999). These technologies have enabled researchers to collect data via e-mail, the Internet, and diskette survey methods. It is a concern of researchers using technology in research, more specifically the use of diskette mail-out surveys, to understand if technology yields different results than the traditional paper and pencil survey method.

Theoretical Base

Much of the research within the field has been dedicated to comparing electronic mail surveys with the traditional paper and pencil method. (Kittleson, 1995; Allen & Fry; 1986; Kiesler & Sproul, 1986; Rafaeli, 1986; Parker, 1992; Kawasaki & Raven, 1995; Truell, 1999). The majority of these studies have shown that technology enhanced data collection and electronic mail surveys have yielded lower response rates (Kittleson, 1995; Allen & Fry; 1986; Kiesler & Sproul, 1986; Rafaeli, 1986). However, these findings are not consistent among all groups. In a corporate setting, an e-mail survey design provided a higher response rate than the traditional method (Parker, 1992). In another group, cooperative extension agents, Kawasaki & Raven (1995) reported a response rate of 83.0%.

Studies (Meehan & Burns, 1997; Webster, 1995; Sudmalis, 1992; Allen, 1987) have described the results of using other electronic survey methods. More precisely, the majority of studies also described the response rates to electronic survey methodology. Allen (1987) found from surveying a group of 249 individuals, that 29.0% responded in the electronic survey group and 49.0% responded to the traditional survey. Webster (1995) used a survey method that utilized an online public access system to dispense a pencil and paper survey. This approach of surveying users provided responses instantaneously in machine readable form. However, the first test of the electronic survey system achieved a response rate of less than 10%. Some studies have shown that even though the response rate is lower, the response time is shorter for e-mail survey than paper and pencil (Oppermann, 1995; Bachmann et al., 1996).

Sudmalis (1992) conducted a survey in an e-mail group ($\underline{n}$=558) which provided a delivered sample of 14.3%. Mavis and Brocato (1998) reported a higher response rate for postal service surveys (77.0%) compared to e-mail surveys (56.0%). Meehan and Burns (1997) completed an electronic survey of a listserv discussion group that yielded a

response rate of 23.6%. A technological concern discovered when surveying a listserv group is the difficulty of defining the target population.
The perceptions of electronic survey participants have been shown to be positive. Researchers have found that respondents of electronic surveys found that those who completed computer surveys reported to find them more interesting and seem to be more aware of their thoughts and feelings while completing them (Rosenfeld,1993; Allen, 1987). Allen (1987) also reported computer respondents gave more varied responses. Other benefits electronic surveys bring to research are the speed in which they can be used to collect data and the low-cost research option they offer (Furlong; 1997, Goree & Marszalek, 1995). Furlong (1997) also stated other potential benefits of using e-mail to conduct survey research include the lack of intermediaries increases the chances that respondents will receive the survey promptly, asynchronous communication allows users to think about answers, the medium itself may encourage users to respond more candidly, and e-mail distribution lists are used to distribute questions and collect responses.

However, Furlong (1997) addressed the concern that data from electronic surveys may not be as representative as that from a mail survey. Researchers may receive a much more biased response from electronic survey methods. There are not many studies that have empirically examined these concerns. Allen and Fry (1986) reported only a minor difference in the means of college sophomore's attitudes between computer and scanned paper groups. The computer-group members reported having more computer experience and students in the scanned paper group were more likely to overestimate their actual grade point average. Bartlett and Kotrlik (1999) also showed, when giving the participants a choice of survey method, there was a difference in the mean score of one self-directed learning instrument when comparing the survey methods and no significant differences in another one.

Purpose

The purpose of this study was to compare the responses to a survey using the mail-out survey method with a diskette format and a traditional paper and pencil format. The null hypothesis was there would be no significant differences between paper and pencil format compared to diskette responses.

Methodology

Participants. The complete frame for this study consisted of all business teachers ($\underline{N}$=1679) in Pennsylvania. The survey sought the participation of a randomly selected group of business teachers ($\underline{n}$=1080) in Pennsylvania.

Instruments. Bartlett-Kotrlik Inventory of Self-Learning (BISL), a resource inventory, and a demographic sheet were placed in a booklet and diskette format (minimum requirements for diskette were IBM platform, 386PC, & Windows based). The Cronbach's alpha for the 11 factor solution of the BISL© are .641 to .947. The overall Cronbach's alpha for the Bartlett-Kotrlik Inventory of Self Learning was .911. This score is above .70 a common criterion used to show instrument reliability. The instrument was developed through the use of a comprehensive review of literature on self-directed learning and includes social, personal, and environmental variables related to self-directed learning.

The demographic sheet collected data concerning the participants gender, age, educational level, ethnicity, years of teaching experience in business education, job tenure, current pursuit of further education in business education, and marital status. All demographic variables have been shown to have relevance to self-directed learning.

Data Collection. Of the 1080 participants, half (n=540) received a cover letter and the traditional paper survey. The other half (n=540), received a cover letter and the disk survey. One week following the initial mailing, the complete sample received a post-card follow-up. At the end of the second week, all individuals who did not respond received a second packet including a second cover letter and paper survey for the traditional group and a cover letter and disk survey for the diskette group. At the end of the third week, a phone follow-up was made to the non-respondents to complete the survey.

Data Analysis. Mean, standard deviation, frequency, and percent were used to describe the participants and their responses in the study. Inferential t-tests were used to compare the means of the total BISL inventory score, individual scales on the BISL, age, and years teaching experience in business education. The non-parametric test of chi-square, was used to compare the respondents choice of survey method. Chi-square was also used for comparing the nominal data including the variables of gender, educational level, ethnicity, job tenure, pursuit of further education in business education, and marital status.

Results

Of the 1080 business teachers, 438 (41.7%) responded to the survey. Of the diskette group 194 (35.2%) responded, while in the traditional group 244 (45.2%) responded. The follow-up yielded 15 additional individuals in the paper and pencil group and 6 for the diskette group. The non-respondents' overall BISL scores did not differ significantly from the diskette or paper and pencil group. This provided the researcher with support to use all respondents, 200 (37.0%) in the diskette group and 259 (48.0%) in the paper and pencil group in the data analysis. Table 1 shows that of the paper and pencil respondents, 180 (69.5%) were female and 79 (30.5%) were male, the majority of the respondents, and 65.5% (n=157) held a degree higher than a four-year degree. These respondents were 45.8 (SD=5.53) year of age, taught for an average of 19.6 (SD=10.39) years, and earn an average of 48.7 (SD=11.89) thousand dollars. Of the diskette survey group, 133 (66.5%) were female, 53 (26.5%) were male and 13 (6.5%) did not respond to the question. The majority of the diskette respondents, 52.0% (n=104) held a four-year degree or higher. The diskette respondent had an average age of 44.7 (SD=12.43) years, the taught for an average of 15.77 (SD=10.72) years, and earn an average of 41.8 (SD=12.79) thousand dollars.

Chi-square was used to compare gender, educational level, ethnicity, job tenure, marital status, and pursuit of further education. Ethnicity had 70% of the cells with an expected count less than 5 and could not be analyzed. Table 2 shows that gender, job tenure, and pursuit of further education were not significantly different. However, the chi-square revealed a significance difference in marital status ($X^2(2, N=422)=29.78, p<.001$) and level of education ($X^2(4, N=422)=46.18, p<.001$) of the participants.

Table 1.

Description of Gender, Educational Level, Job Tenure, Marital Status and Pursuit Of Further Education Of Diskette And Paper And Pencil Respondents

	Traditional		Diskette	
	N	%	N	%
Gender				
Female	180	69.5	133	66.5
Male	79	30.5	53	26.5
Missing	0	0.0	14	7.0
Educational Level				
4 year degree	91	35.1	55	27.5
Masters degree	89	34.4	67	33.5
Masters plus 30/Specialist	77	29.7	34	17.0
Doctoral	1	.4	3	1.5
Other	0	0.0	27	13.5
Missing	1	.4	14	7.0
Marital Status				
Married	197	76.1	167	83.5
Single	32	12.4	5	2.5
Divorced/Separated	21	8.1	0	0.0
Missing	9	3.5	28	14.0
Job Tenure				
Yes	228	88.0	144	72.0
No	30	11.6	29	14.5
Missing	1	.4	27	13.5
Pursuit of Further Education				
Yes	94	36.3	72	36.0
No	64	63.3	111	55.5
Missing	1	.4	17	8.5
Ethnicity				
Caucasian	247	95.4	167	83.4
African American	4	1.5	5	2.5
Native American	5	1.9	1	.5
Asian	0	0.0	2	1.0
Missing	3	1.2	25	12.5

Table 3 shows the t-test on age was not significantly different between the diskette and paper and pencil participants, while years teaching experience in business education ($t(410) = 3.63$, $p < .001$) and salary ($t(407) = 5.60$, $p < .001$) did reveal significant differences.

Table 2.

Comparison of Gender, Educational Level, Job Tenure, Marital Status and Pursuit Of Further Education Of Diskette And Paper And Pencil Respondents

	X^2	df	p
Gender	.209	1	.648
Educational Level	46.18	4	<.001
Marital Status	29.78	2	<.001
Job Tenure	4.19	2	.123
Pursuit of Further Education	.386	1	.534
Ethnicity	6.65	4	.156

Table 3.

Comparison of Age, Years Teaching, and Salary Among Diskette And Paper And Pencil Respondents

	T	df	p
Age	-.977	311.08	.329
Years Teaching	-3.63	410	<.001
Salary	-5.60	407	<.001

Note. Age had unequal variance (F=8.512, p=.004)

Chi-square revealed that a significantly different number of participants responded to the paper and pencil and diskette survey $X^2((1, N=459)=7.58, p<.006)$. Levene's test for equal variance revealed that peer learning had a significantly different variance (F=9.98, p=.002) between the traditional and traditional group. Table 4 shows that the t-tests revealed no significant differences between the diskette survey group and paper survey group on the over BISL score. However, the t-test did reveal a significant difference on the Peer Learning sub-scale ($t(431) = 2.297$, $p=.002.$) and the Help Seeking sub-scale ($t(431)=1.99$, $p=.05$) between the diskette survey group and the paper survey group on the BISL score. The researcher does acknowledge the chance of error when conducting this number of t-tests.

Table 4.

Comparison of Traditional and Diskette Scores on the BISL and Sub-Scales

Inventory	Traditional Survey		Diskette Survey				
	Mean	SD	Mean	SD	df	t	p
Performance and Self-Efficacy of Work	6.09	1.63	6.42	1.31	423	1.35	.178
Others Ratings	6.20	.96	6.16	1.14	433	-.39	.695
Goal Setting	6.04	.81	6.10	.89	435	.74	.459
Intrinsic Motivation	6.02	.77	6.03	.88	431	-1.29	.199
Attitude Towards Technology	5.97	1.09	6.11	.96	434	1.43	.154
Help Seeking	5.58	.95	5.77	.96	431	1.99	.050
Peer Learning	6.09	1.63	6.42	1.31	431	2.30	.022
Supportive Workplace	5.01	1.40	5.09	1.36	427	.61	.545
Time Management	3.28	1.47	3.28	1.60	423	-.01	.996
Extrinsic Motivation	4.55	1.50	4.53	1.54	431	-1.29	.434
External Support	4.39	1.81	4.53	1.92	434	.78	.434
Bartlett-Kotrlik Inventory of Self-Learning	59.63	6.95	60.49	6.65	389	1.22	.233

Conclusions

(1) There was not a significant difference on the mean score of the BISL between diskette and paper and pencil survey groups. (2) There was a significant difference on the peer learning sub-scale between the diskette and paper and pencil survey groups. (3) A significantly larger number of business teachers chose to reply via paper and pencil survey format rather than diskette format. This confirms other research using electronic methods of data collection (Webster, 1995; Sudmalis, 1992; Allen, 1987). (4) There were significant differences in the demographics between the two groups in the areas of marital status, years teaching, and salary.

Recommendations

(1) Researchers must be made aware there may be some differences between data collected on paper and pencil surveys and diskette surveys. (2) Researchers must also be aware of the possible bias response with demographic differences being present in individuals who choose to respond to diskette and paper and pencil surveys. (3) Researchers must also select the appropriate method when collecting data.

Implications

Research has shown it cannot be assumed that collecting data via electronic means provides equivalent results as paper and pencil survey methods. Since responses were significantly different between the two groups, this method of data collection adds more unexplained variance to the research. This method might help improve the effectiveness and efficiency in obtaining responses to surveys. However, more business teachers responded to the paper and pencil survey over the diskette.

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Factors Influencing A Student's Perception of the Image of a Career and Technical Education Student Organization

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ABSTRACT

The purpose of the study is to determine if there is a difference between FFA members and non-members as to their perception of the overall image of the FFA, and to determine if students' perceptions of the image of the FFA are influenced by social and demographic characteristics. Data were collected using a questionnaire administered to 404 students enrolled in the Agriscience Applications course in 27 schools in North Carolina. It can be concluded that: A student's decision to join or not join the FFA is influenced by their perception of the image of FFA in their school. A student's gender, ethnicity, enrollment choice, prior enrollment in an agriculture class, block scheduling, grade level and extracurricular activities do not influence their perceptions of the FFA organization's image.

Students tend to join and participate in the FFA based upon the organization's ability to meet a student's need for a sense of belonging. Based upon the responses of members, the social aspects of the organization were motivating factors in their desire to be members.

One traditional method that the FFA uses to encourage students to feel as if they belonged as members of the organization was through the use of the FFA jacket. Based upon this research, both FFA members and non-

members hold a less than favorable opinion of the FFA jacket today. The FFA may need to work toward providing more sophisticated methods of instilling that sense of belonging and comradeship that the FFA has enjoyed in its long history.

INTRODUCTION

Career and technical student organizations are valuable learning tools that both enhance and supplement instruction. Leadership and personal development is an important component of the career and technical student organizations, and they encourage members to develop life-essential skills such as citizenship and cooperation as part of their experience in the organization. While vocational education prepares students for careers, student organizations prepare students for a broad range of community interests. This systematic program of developing leadership, citizenship and cooperation is the essential purpose of the career and technical student organizations.

The National FFA Organization spends more than $7 million dollars annually to maintain existing programs and develop new programs for its membership (National FFA Foundation, 1997). In North Carolina, the state FFA association spends more than three hundred thousand dollars each year on career development events and leadership programs. An effort is made each year to create a relevant and service-oriented FFA organization in North Carolina. After three years of concerted effort from 1995 to 1998 to improve services to members, total membership did not increase. In 1998, approximately 16,000 students said "no" to the activities, programs and services of the North Carolina FFA Association (NCDPI, 1995).

The image of the FFA is defined as the mental picture that forms when certain characteristics about the FFA are brought to one's attention. This image can be either positive or negative and can be based upon known facts or supposition (The American Heritage College Dictionary, 1993). The value of the any member-based organization resides essentially in the minds of its members. Part of the value can be traced to tangible items such as a magazine subscription or a leadership manual while the remainder of the value of membership is found in intangible things such as sense of belonging or a feeling of pride by association with the organization (Sirkin and McDermott, 1995). If the organization has a positive image and provides members with a sense that their lives are more satisfying as a result of the association with the organization, then membership recruitment and retention is significantly easier (Sirkin and McDermott, 1995). The question arises as to whether agricultural education students have a positive perception of the FFA organization. Furthermore, are there social and demographic factors that are influencing a student's perception of the FFA's image?

Maslow introduced the concept of self-actualization in his book, Motivation and Personality. Maslow believed that the human individual is an integrated organism. It is impossible to separate the various components of a person's self. When an individual experiences hunger, it is their whole self that is hungry and not just selected physiological components. It is the whole person that has the desire for food, shelter and safety. Maslow's theory rests upon the idea that an individual progresses through a series of stages during their lifetime. The stages are generally identified as physiological and safety needs, esteem needs, cognitive and aesthetic needs, and self-actualization. Even if all of the other needs are met, the individual will develop a sense of restlessness and discontentment unless he or she is accomplishing goals true to oneself (Maslow, 1970). Maslow suggested that an individual progresses through this hierarchy in the order described. However, the order may be rearranged as a result of an individual's experiences (Weiten, 1989). Maslow's Hierarchy is relevant to this study in that it offers a basis for understanding potential reasons why students join and participate in youth organizations. If students are motivated by a sense of belonging, a desire for status, and a need to feel important, then this theory may explain why students tend to join and participate in the FFA organization.

In a study of 1121 rural and urban high school students in Indiana and Michigan, Frick, Birkenholz, Gardner and Machtmes (1995) found that students held a positive view of agriculture, even though they were not members of the FFA.

Scanlon, Yoder, Hoover and Johnson (1989) found that the top recruiting practices perceived to be most effective by teachers were participation in career development events, FFA activities and awards programs. Teachers also perceive personal contacts with prospective students by current students and recruitment presentations made to eighth graders as valuable recruiting tools. Scanlon, Yoder, Hoover and Johnson (1989) also found that eleventh grade FFA members reported that the development of leadership skills, the variety of local and state education activities, and the communication skills developed through FFA activities were the most common perceptions attributing to their decision to join the FFA. Among eleventh grade student who were not FFA members, the most common perceptions were that FFA activities were not interesting, take too much time out of school and interfere with other activities. The non-members also believe that they do not fit in with the farmer-type image projected by their high school agricultural education program.

Sutphin and Newsom-Stewart (1995) found that students held an overall perception that activity-centered learning, opportunities for work experience, and teamwork and life skills were valuable and good reasons for enrolling in agricultural education courses. The study also found that no significant ethnic difference existed in the students' decisions to study agriculturally related courses with respect to preparation for jobs and higher education, social and development skills, peer pressure, enhancement of academic skills, and the activity-centered nature of agricultural education courses (Sutphin, Newsom-Stewart).

One major educational reform initiative is the implementation of block scheduling in high schools. In a study involving 142 agricultural education programs in North Carolina, Becton (1996) found that teachers believed that block scheduling has a deleterious effect on FFA member recruitment and retention. Furthermore, block scheduling was perceived to have little impact on classroom instruction or supervised agricultural experience. Communication between teachers and students not currently enrolled in agriculture classes was identified as a major problem. Wortman (1997) found that students who did not serve in official leadership positions in the local FFA chapter had no significant positive or negative perception regarding block scheduling and is impact on FFA activities. Students who served as FFA officers reported that block scheduling negatively influenced student participation in FFA activities.

Talbert and Larke (1995) found that minority students, especially minority females were underrepresented in agricultural education. Also, minority students had more negative perceptions about agriculture than non-minority students did. With regard to FFA participation, minority students have fewer role models. They reported that minority students saw themselves as unlikely candidates for careers in the agriculture industry.

In North Carolina, the Latino population has risen significantly over the last eight years. The number of Latinos enrolled in North Carolina schools has risen an average of 285% in the last eight years. Factors identified as critical challenges to involving Hispanic students in FFA activities were the lack of role models in agricultural education for Hispanic youth, the absence of FFA promotional and instructional materials prepared in the Spanish language, and the unavailability of agricultural education teachers that can speak Spanish fluently in order to communicate with students (Martinez, 1998).

PURPOSE

The purpose of the study was to determine:

1. If there a difference between FFA members and non-members as to their perception of the overall image of the FFA.
2. Are students' perceptions of the image of the FFA influenced by gender, ethnicity and FFA membership status?
3. Are students' perceptions of the image of the FFA influenced by enrollment choice, prior enrollment in an agriculture class and FFA membership status?
4. Are students' perceptions of the image of the FFA influenced by block scheduling and FFA membership status?
5. Is there a relationship between a student's grade level and their perceptions of the image of the FFA?
6. Is there a relationship between the number of clubs and formal athletic activities in which a student participates and their perceptions of the image of the FFA?

METHODS

The population for this study is first year students of agricultural education who were enrolled in the Agriscience Applications course in North Carolina schools. This was the first opportunity that most students should have had to join the FFA organization. Four hundred and four students were selected for the study based upon the geographic region in which their school is located. Schools selected for this study all had FFA chapters and were categorized as having 33% or less FFA membership, 34-66% membership, or 67-99% membership. An equal number of schools were selected in each membership percentage category.

Because this is descriptive research, a questionnaire was developed based upon a series of FFA program characteristics. Participants were asked to respond by indicating their agreement with a series of 18 statements regarding the image of the FFA. The response choices and their numerical values are as follows: Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1, and Do Not Know = 0. The midpoint of this scale was 2.5, and all mean scores above this number were interpreted be in agreement with the item. All mean scores below 2.5 were considered to be in disagreement with the item and items with a mean score of 2.5 were interpreted to represent a neutral opinion.

The scaled items were derived from the objectives of the FFA Local Program Success Model (National FFA Organization, 1997a). The Local Program Success Model was created and developed by experts in agricultural education for the purpose of improving local agricultural education programs. The researcher's graduate advisory committee, as a panel of experts in agricultural education and FFA, identified additional items to be included in the survey instrument and modified some items derived from the Local Program Success Model. The instrument was field tested and yielded a Cronbach's Alpha score of 0.88 as a measure of internal consistency of the instrument.

The data were collected and tabulated using Microsoft Excel® and transferred to the Statistical Package for Social Sciences (SPSS) 8.0.0® for Windows®. The first procedure involved an analysis of descriptive statistics in order to have a clear profile of the sample. Descriptive statistics were generated for gender, ethnicity, grade level, prior enrollment, enrollment choice, block schedule characteristics of the school, FFA membership status, and number of clubs in which survey respondents were members.

The next procedure involved an analysis of the first research question. A multivariate analysis was used to examine the 18 image items simultaneously. If differences were determined to exist between FFA member and non-member perceptions, one-way analyses of variance determined which items accounted for the overall differences. A multivariate analysis of variance test was performed to determine if students' perceptions of the FFA image were influenced by selected demographic and school characteristics as described in research questions two through four. For those multivariate analyses that yielded significant differences in the main effects of independent variables, a one-way analysis of variance was performed to pinpoint any significant differences.

Prior to any multivariate analyses, the dependent variables were compared using the Pearson Product Moment Correlation statistic to determine if a significant correlation existed between the scaled items on the survey instrument. Hotelling's Trace was the statistic used to determine the level of significance in each multivariate analysis. In addition, the Pearson Product Moment Correlation statistic was used to answer research question five by determining if a relationship existed between the grade level of students and the students' perception of the FFA image and question six by determining if a relationship existed between the number of clubs in which students were members and their perceptions of the FFA image.

RESULTS

The majority of study participants were males, constituting 76 % of the data sample. In all, there were 308 males and 96 females in the data sample. Females comprised 22.6 % of the members and 24.5 % of the non-members in the study. Of all participants in the study, 41.5 % indicated that they were FFA members and 58.5 % were non-members. Two hundred ninety nine Caucasian students and 102 non-Caucasian students participated in the study. Because of the low numbers of certain ethnic groups in the sample population, all ethnic groups except Caucasian were combined for data analysis. Freshmen made up 51.7 % of the students in the survey while seniors were the fewest number of students in the sample, comprising only 5.7 % of the sample. With respect to club participation, 34% of respondents indicated that they were not members of any club or school organization and did not participate in any kind of extracurricular athletic sport. This constituted the largest number of responses in the sample. More FFA members participated in clubs and athletic activities than non-members. Participants in the study were also asked to provide data regarding their choices in signing up for Agriscience Applications. The majority of students reported that they signed up for the class by their own free will and that this was their first agriculture class. Eighty-nine percent of the students in this study report that their school is on a block schedule system.

A multivariate analysis was performed using as the dependent variables the items on the instrument designed to measure students' opinions of the FFA organization's image. The independent variable was FFA membership status. This analysis yielded a Hotelling's Trace value of 0.379 ($p < .05$). Therefore, a significant difference exists between FFA members and non-members with regard to their opinions of the FFA organization's image. Table 1 represents the results of the analysis of data gathered from survey respondents as to their opinion of the overall image of the FFA.

FFA members reported higher mean scores than non-members for every image item. Both members and non-members agreed that the FFA is not just for those students who wish to become farmers. Members generated a mean score of 3.29 (SD=0.75) and non-members generated a mean score of 3.12 (SD=0.71) for this item. Members also rated highly the item that the FFA is for all students not just an elite few (M=3.25, SD=0.82). Members indicated that they were familiar with the FFA prior to signing up for the agriculture course (M=3.10, SD=0.65). The FFA members in the study indicated that they thought that the FFA was a "cool" organization and would join the FFA in future years if given the chance (M=3.13, SD=0.66). They also indicated that the FFA at their school had a great image (M=3.07, SD=0.77). FFA members had received a lot of information about the FFA (M=3.24, SD=0.66). Members indicated that the FFA advisor and their parents had encouraged them to join the FFA and that many of their friends were members of the FFA organization. The FFA advisor scored higher than parents or friends as recruiters for the FFA (M=3.14, SD=0.77).

FFA members in the study indicated that being in the FFA was cost effective, considering the amount of FFA activities available to them and the cost of participation in these activities (M=3.07, SD=0.81). FFA members indicated that participation in the FFA was worth at least the cost of the membership dues (M=3.21, SD=0.77). Overall, FFA members rated the FFA as an organization that has a positive influence on their social standing in school, that many of their friends are involved in the organization, and that FFA members are people who treat others with kindness and respect. FFA members did not entirely agree with all items regarding the FFA organization's image. The members in the study indicated that they did not like the official FFA jacket (M=2.40, SD=0.94).

Non-members agreed that they knew about the FFA before signing up for the agriculture class (M=2.67, SD = 0.88) and that they had been provided with a lot of information about the FFA (M=2.80, SD=0.82). Non-members also indicated that the FFA had a great image at their school (M=2.71, SD=0.88). Furthermore, non-members reported that the local FFA chapter had many FFA activities (M=2.70, SD=0.85) and that these activities were for all students regardless of their ethnicity (M=3.25, SD=0.68). On average, both FFA members and non-members agreed that the FFA was an organization open to students of both genders and all ethnic groups. Non-members also indicated that joining the FFA was cost effective (M=2.66, SD=0.84).

With regard to recruiting practices, non-members indicated that their FFA advisor encouraged them to join the FFA organization (M=2.73, SD=0.83) and that the local FFA chapter has many activities in which members can participate (M=2.70, SD=0.85). Non-members reported that most of their friends were not FFA members (M=2.22, SD=0.91) and non-members agreed with FFA members in their dislike of the FFA jacket (M=1.97, SD=0.93).

Students' Perceptions of the FFA Image as Influenced by Selected School and Demographic Factors

There were no significant differences identified in the interaction effects between FFA membership status, gender and ethnicity. FFA membership status and prior enrollment and enrollment choice in an agriculture class had no significant effect the opinions of students. A school's block scheduling status did not significantly influence the respondents' opinion of the FFA image. Furthermore, the interaction effect of FFA membership status and block scheduling did not yield significant differences.

A Pearson Product Moment Correlation Coefficient of 0.08 (p=.13) for the correlation between FFA organizational image and the respondent's grade level was generated. Based upon these results, there was not a significant relationship between the respondents' grade level and their opinions of the FFA organization's image. Another Pearson Product Moment Correlation was computed to test the significance of the relationship between the respondents' level of participation in school organizations on their opinions of the FFA image. A correlation coefficient of 0.096 (p=.11) for the FFA organizational image was generated. There was no significant relationship found between the respondents' level of participation in school organizations and their opinions of the FFA organization's image.

Table 1

Perceptions of Members and Non-Members of the Overall Image of the FFA

FFA Image Items	Members (n=167)		Non-Members (n=237)		F
	Mean	Std. Dev.	Mean	Std. Dev.	
The FFA has activities for all students regardless of whether they are male or female.	3.45	0.56	3.41	2.23	0.06
The FFA has activities for all students regardless of race.	3.41	0.66	3.25	0.68	5.03*

I would join the FFA in the future if given the chance.	3.29	0.75	2.42	0.95	80.96*
The FFA is only for students who want to be farmers.	3.29	0.75	3.12	0.71	4.71*
The FFA is for all students in my agriculture class, not just a few elite students.	3.25	0.82	3.07	0.73	5.51*
I have been provided with a lot of information about the FFA.	3.24	0.66	2.80	0.82	31.38*
The benefits I would receive from being in the FFA are worth at least the cost of the FFA membership dues.	3.21	0.77	2.66	0.84	35.13*
My agriculture teacher encouraged me to join the FFA.	3.14	0.77	2.73	0.83	24.64*
I think that the FFA is a cool organization.	3.13	0.66	2.54	0.93	43.32*
The FFA information I have seen looks modern and up-to-date with other student organizations.	3.11	0.69	2.93	2.28	0.85

*p<.05. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree

Table 1 Continued
Perceptions of Members and Non-Members of the Overall Image of the FFA.

FFA Image Items	Members (n=167)		Non-Members (n=237)		F
	Mean	Std. Dev.	Mean	Std. Dev.	
FFA members at my school are nice people who treat non-members with respect.	3.11	0.65	2.88	0.77	8.76*
I knew what the FFA was before signing up for the class.	3.10	0.65	2.67	0.88	23.58*
The FFA has a great image at our school.	3.07	0.77	2.71	0.88	14.94*

Participation in the FFA does not cost much.	3.07	0.81	2.97	2.66	0.23
A lot of my friends are FFA members.	3.01	0.81	2.22	0.91	72.38*
Our school has a lot of FFA activities.	2.94	0.66	2.70	0.85	6.33*
My parents encouraged me to join the FFA.	2.58	0.79	1.86	0.72	70.15*
I like the FFA jacket, regardless of whether or not I am a member.	2.40	0.94	1.97	0.93	17.97*

*p<.05. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

> Conclusion 1: A student's decision to join or not join the FFA is influenced by their perceptions of the image of the FFA organization in their school.

In general, FFA members' responses to items related to the image of the FFA organization were significantly more positive than the responses of non-members.

Conclusion 2: A student's gender and ethnicity do not influence their perceptions of the image projected by the FFA organization in their school.

Students' responses to items on the questionnaire were not significantly influenced by gender and ethnicity. The FFA has developed numerous recruiting materials in recent years that not only represent the current ethnic and gender characteristics of the membership, but also portray what FFA membership could be if it were more diverse in ethnicity and gender.

Conclusion 3: Voluntary enrollment in an agriculture class and prior enrollment in an agriculture class does not influence a student's perceptions of the image projected by the FFA organization in their school.

This study did not find that student's enrollment choice or prior enrollment in an agriculture class made a significant difference in their decision to join or not join the FFA. Students who are involuntarily enrolled in an agricultural class may not necessarily be adverse to joining the FFA, just as students who voluntarily enroll in an agriculture class are not necessary motivated to join the FFA.

Conclusion 4: Block scheduling does not influence a student's perceptions of the image projected by the FFA organization in their school.

Once considered to be an obstacle in the planning and implementation of FFA activities (Becton, 1996), block scheduling did not influence students' decision to the extent that it either encourages or discourages membership. North Carolina schools have been utilizing block scheduling for a number of years, and perhaps FFA advisors have begun effectively recruit and retain FFA members under the system. Because a low number of students were on a traditional schedule, it would be imprudent to generalize the results of the analysis of this research question to the entire population of students that were enrolled in Agriscience Applications in the spring of 1999.

Conclusion 5: Grade level does not influence a student's perceptions of the image projected by the FFA organization in their school.
This study did not find a relationship between a student's grade level and their FFA membership status.

Conclusion 6: The scope of participation in school clubs and formal athletic activities does not influence a student's perceptions of the image projected by the FFA organization in their school.
The scope of participation in school clubs and organizations might be effective in characterizing the students who might join and participate in FFA activities, but it does not singularly affect a student's opinions of the FFA organization's image.

The results of this study are supported in the literature by Maslow (1970). At an age when most students are becoming eligible for FFA membership, they are also entering a period of human growth and development characterized by a need for contact, intimacy and a sense of belonging. The implications are significant for the FFA and agricultural education in that students tend to join and participate in the FFA based upon the organization's ability to meet a student's need for a sense of belonging. The FFA should continue to seek ways to involve all members in positive personal growth activities that allow students to experience that sense of belonging. Based upon the responses of members, the social aspects of the organization were motivating factors in their desire to be members. However, the students today are not necessarily interested in some of the traditions of the FFA.

One traditional method that the FFA uses to encourage students to feel as if they belonged as members of the organization was through the use of the FFA jacket. Students today hold a less than favorable opinion of the FFA jacket today. The FFA may need to work toward providing more sophisticated methods of instilling that sense of belonging and comradeship that the FFA has enjoyed in its long history. Agriculture teachers should not necessarily rely on traditional methods for recruiting and retaining members in the FFA. The FFA services provided to students in years past will not necessarily bring students into FFA membership today. Agriculture teachers should appreciate the traditions of their profession, and use these traditions as motivators to teach effectively. Modern recruiting methods should be developed that capitalize on the favorable impression created by the FFA organization's image.

The findings that emerged from this study led to certain recommendations pertaining to future research. The proposed research might be valuable for those factors reported as being significant for both non-member and FFA members. A proposal would be to conduct a study to determine the continued need for the official FFA jacket. Both the majority of members and non-members expressed negative opinions as to the style of the FFA jacket. The official FFA jacket has been in use for much of the FFA's history and is a highly recognizable symbol of the organization. Perhaps a study would identify the continued value of the FFA jacket to the organization and suggest alternatives to its use. Another proposal would be to conduct research into the area of gender and ethnic diversity among agricultural education students. While this study found that no significant differences exist between students of differing ethnic backgrounds, the low number of ethnic minorities in this study necessitates the need for additional study.

For more than 70 years, the FFA has endeavored to make a positive difference in the lives of students by developing their potential for premier leadership, personal growth and career success through agricultural education. The FFA advisor must be considered to be a major factor in this endeavor. At one school, the students were in the process of completing the survey instrument when a student raised his hand and, referring to an item on the questionnaire on the instrument, asked the instructor, "Have you encouraged us to join the FFA?" After a pause, the instructor was forced to answer in the negative. In this researcher's opinion, the most disappointing answer given by a student during the administration of the survey instrument was that he or she, "didn't join the FFA because it isn't at my school anymore".

The agriculture teacher has the primary responsibility of seeing that the FFA is an important and functional part of the agricultural education curriculum. He or she must secure positive school and community support for FFA programs and encourage students to participate in these programs. The success or failure of the FFA organization may depend upon a multitude of factors, but the FFA advisor is perhaps the most important factor in the equation.

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Factors Influencing A Student's Perception of the Programs and Services Offered by a Career and Technical Education Student Organization

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ABSTRACT

The purpose of the study is to determine if there is a difference between FFA members and non-members as to their perception of FFA programs and services, and to determine if students' perceptions of FFA programs and services are influenced by gender and ethnicity, enrollment choice, prior enrollment in an agriculture class, block scheduling, grade level and extracurricular activities.

Data were collected using a questionnaire administered to 404 students enrolled in the Agriscience Applications course in 27 schools in North Carolina. It can be concluded that: A student's decision to join or not join the FFA is influenced by their perception of the image of FFA programs and services. A student's gender, ethnicity, enrollment choice, prior enrollment in an agriculture class, block scheduling, grade level and extracurricular activities do not influence their perceptions of the FFA programs and services.

The implications are significant for the FFA and agricultural education in that students tend to join and participate in the FFA based upon the organization's ability to meet a student's need for a sense of belonging. The FFA should continue to seek ways to involve all members in positive personal growth activities that allow students to experience that sense of belonging. Based upon the responses of members, the social aspects of the organization were motivating factors in their desire to be members.

INTRODUCTION

Leadership and personal development is an important component of career and technical student organizations, and these organizations encourage students to develop life-essential skills such as citizenship and cooperation as part of their experience. Activities and programs are designed to compliment formal instruction in vocational education. This systematic program of developing leadership, citizenship and cooperation in students is the essential purpose of career and technical student organizations.

Does the FFA, a career and technical student organization for agricultural education students, provide relevant programs and services to its members? In a review of selected FFA programs, it was noted that member participation had declined in North Carolina in selected career development events, scholarship programs, Agriscience student awards, and other individual award areas (North Carolina FFA Association, 1998). Because many FFA activities require student participation at the local level before advancing to state and national levels, this decline in state level participation may be indicative of less involvement by students in FFA activities at the local level.

The National FFA Organization and similar organizations in other states should consider membership numbers to be a potential predictor of a student's perception of the relevance of the organization (Sirkin and McDermott, 1995). If this is true, then the FFA must make substantial programmatic changes in order to more effectively satisfy students' interests and needs. One potential objection that may be offered by non-members is that FFA programs and services are not worth the financial investment one has to make in order to be an FFA member. Sirkin and McDermott (1995) contend that members will desire to maintain their membership in an organization if they perceive that it is worth at least the value of membership dues.

Although some non-members might offer the argument that they cannot afford the cost of FFA dues, it is important to note that FFA membership dues on the state and national levels have not significantly increased. From 1928 to 1969, the total cost for national FFA dues increased from ten cents per member to 50 cents per member. From 1969 to 1989, national FFA dues increased from 50 cents per member to $3.00 per member. North Carolina state association dues have increased in a similar fashion. From 1984 to 1995, state FFA member dues increased from $2.50 per member to $4.50 per member. In 1999, state and national dues were $4.50 and $5.00 respectively (North Carolina FFA Association, 1998). For these dues, an FFA member can expect to receive the official magazine of the National FFA Organization, The FFA New Horizons Magazine, an official membership card, eligibility to apply for FFA scholarships, eligibility to participate in FFA career development events, individual member awards programs and other local FFA activities and programs.

Maslow introduced the concept of self-actualization in his book, Motivation and Personality. Maslow believed that the human individual is an integrated organism. It is impossible to separate the various components of a person's self. When an individual experiences hunger, it is their whole self that is hungry and not just selected physiological components. It is the whole person that has the desire for food, shelter and safety. Maslow's theory rests upon the idea that individuals progress through a series of stages during their lifetime. The stages are generally identified as physiological and safety needs, esteem needs, cognitive and aesthetic needs, and self-actualization. Even if all of

the other needs are met, the individual will develop a sense of restlessness and discontentment unless he or she is accomplishing goals true to oneself. The individual must be true to his or her own nature and pursue goals that are true to his or her own nature (Maslow, 1970). Maslow suggested that an individual progresses through this hierarchy in the order described. However, the order may be rearranged as a result of an individual's experiences. By suggesting this, Maslow recognized the biological and social bases of human motivation (Weiten, 1989).
Maslow's Hierarchy is relevant to this study in that it offers a basis for understanding potential reasons why students join and participate in youth organizations, namely the FFA organization. If students are motivated by a sense of belonging, a desire for status, and a need to feel important, then this theory may explain why students tend to join and participate in the FFA organization.

> Shinn and Vaughn (1993) found that the national FFA organization should develop new career development events based upon emerging student interests and agricultural technologies. Furthermore, they recommended that recognition programs should be periodically reviewed to determine their effectiveness in motivating students and the FFA should continue its efforts to promote ethnic and gender diversity in its membership. Finally, the study found that the national FFA organization should develop strategies for encouraging participation at all levels of the organization: local, state and national.

Wingenbach and Kahler (1997) found that a positive relationship existed between a student's perception of his or her leadership and life-skill ability and participation in FFA leadership activities. In addition, Turner and Herren (1997) concluded that agricultural education students who join the FFA had a higher need for achievement, affiliation and power than non-members did. Furthermore, African American students had a higher need for power, achievement and affiliation than Caucasians and others. Female agricultural education students had higher needs for affiliation and power than their male counterparts.

Rossetti, McCaslin, and Gliem (1996) examined the factors influencing students' decisions on whether to become FFA members. Students who were members of the FFA reported that assistance in achieving future career goals and other goals, interest in FFA activities and programs and the enjoyment derived from them, and leadership skill development were major reasons for being member. Non-FFA members responded in the study by saying that they did not have enough time for FFA activities and having more important things to do as major reasons for not joining the FFA.

One major reform initiated in recent years is the implementation of block scheduling in high schools. Becton (1996) investigated the impact of block scheduling on FFA programs and activities and found that teachers believe that block scheduling has a deleterious effect on FFA member recruitment and retention. Communication between teachers and students not currently enrolled in agriculture classes was identified as a major problem. Wortman (1997) found that students who did not serve in official leadership positions in the local FFA chapter had no significant positive or negative perception regarding block scheduling and its impact on FFA activities. Students who served as FFA officers reported that block scheduling negatively influenced student participation in FFA activities.

The traditional method of delivery for FFA programs may influence the non-traditional student's decision to participate in these programs. Sutphin, Newsom-Stewart (1995) found that males were influenced to enroll by peer pressure more than females, and were more apt to study agriculture in order to escape academic courses such as foreign language. Females were more inclined to enroll for the purpose of developing the team and life skills emphasized by FFA (Sutphin, Newsom-Stewart, 1995).

> Garton, Thompson and Cano (1997) found that a majority of students preferred introversion, sensing, feeling and judgment learning preferences. Conversely, teachers preferred active learning as evidenced by extroversion, intuitive, thinking and judgment learning preferences. They concluded that while teachers focus on achievement and competition, many students tend to avoid competition. Teachers who use FFA competitive events as a recruitment and retention strategy may need to proceed with caution. The structure of FFA competition is such that some students may be discouraged from joining the FFA.

PURPOSE

The purpose of the study is to determine the factors influencing a student's decision to join or not join the FFA. The specific research questions are:

1. Is there a difference FFA members and non-members as to their perceptions of the effectiveness of FFA programs and services to meet an individuals needs for premier leadership, personal growth and career success?
2. Are students' perceptions of FFA programs and services influenced by gender, ethnicity and FFA membership status?
3. Are students' perceptions of FFA programs and services influenced by enrollment choice in an agriculture class, prior enrollment in an agriculture class and FFA membership status?
4. Are students' perceptions of FFA programs and services influenced by block scheduling and FFA membership status?
5. Is there a relationship between a student's grade level and their perceptions of the value of FFA programs and services?
6. Is there a relationship between the number of clubs and formal athletic activities in which a student participates and their perceptions of FFA programs and services?

METHODS

The population for this study is first year students of agricultural education who were enrolled in the Agriscience Applications course in North Carolina schools. This was the first opportunity that these students should have had to experience FFA programs and services. Four hundred and four students were selected for the study based upon the geographic region in which their school is located. Schools selected for this study all had FFA chapters and were categorized as having 33% or less FFA membership, 34-66%

membership, or 67-99% membership. An equal number of schools were selected in each membership percentage category.

Because this is descriptive research, a questionnaire was developed based upon a series of FFA program characteristics. Participants were asked to respond by indicating their agreement with a series of 18 statements regarding FFA programs and services. The response choices and their numerical values are as follows: Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1, and Do Not Know = 0. The midpoint of this scale was 2.5, and all mean scores above this number were interpreted be in agreement with the item. All mean scores below 2.5 were considered to be in disagreement with the item and items with a mean score of 2.5 were interpreted to represent a neutral opinion. The scaled items were derived from the objectives of the FFA Local Program Success Model (National FFA Organization, 1997a). The Local Program Success Model was created and developed by experts in agricultural education for the purpose of improving local agricultural education programs. The researcher's graduate advisory committee, as a panel of experts in agricultural education and FFA, identified additional items to be included in the survey instrument and modified some items derived from the Local Program Success Model. The instrument was field tested and yielded a Cronbach's Alpha score of 0.83.

The data were collected and tabulated using Microsoft Excel® and transferred to the Statistical Package for Social Sciences (SPSS) 8.0.0® for Windows®. The first procedure involved an analysis of descriptive statistics in order to have a clear profile of the sample. Descriptive statistics were generated for gender, ethnicity, grade level, prior enrollment, enrollment choice, block schedule characteristics of the school, FFA membership status, and number of clubs in which survey respondents held membership. A multivariate analysis was used to examine the 18 items on the questionnaire simultaneously and if differences were determined to exist between FFA member and non-member perceptions, one-way analyses of variance determined which items accounted for the overall differences.

Prior to any multivariate analyses, the dependent variables were compared using the Pearson Product Moment Correlation statistic to determine if a significant correlation existed between the scaled items on the survey instrument. Hotelling's Trace was the statistic used to determine the level of significance in each multivariate analysis. The next procedure involved a multivariate analysis of variance test to determine if students' perceptions of FFA programs and services were influenced by selected demographic and school characteristics as described in research questions two through four. For those multivariate analyses that yielded significant differences in the main effects of independent variables, a one-way analysis of variance was performed to pinpoint any significant differences.

In addition, the Pearson Product Moment Correlation statistic was used to answer research question five by determining if a relationship existed between the grade level of students and the students' perception of FFA programs and services and question six by determining if a relationship existed between the number of clubs in which students were members and their perceptions of FFA programs and services.

RESULTS

The majority of study participants in the 27 schools involved in the study were males, constituting 76 % of the data sample. In all, there were 308 males and 96 females in the data sample. Females comprised 22.6 % of the members and 24.5 % of the non-members in the study. Of all participants in the study, 41.5 % indicated that they were FFA members and 58.5 % were non-members. Two hundred ninety nine Caucasian students and 102 non-Caucasian students participated in the study. Because of the low numbers of certain ethnic groups in the sample population, all ethnic groups except Caucasian were combined for data analysis.

Freshmen made up only 51.7 % of the students in the survey while seniors comprised only 5.7 % of the sample. With respect to club participation, 34% of respondents indicated that they were not members of any club or school organization and did not participate in any kind of extracurricular athletic sport. More FFA members participated in clubs and athletic activities than non-members.

Participants in the study were also asked to provide data regarding their choices in signing up for Agriscience Applications. The majority of students reported that they signed up for the class by their own free will and that this was their first agriculture class. Eighty nine percent of the students in this study report that their school is on a block schedule system.

A multivariate analysis was performed using as the dependent variables the items on the instrument designed to measure students' opinions of FFA programs and services. The independent variable was FFA membership status. This analysis yielded a Hotelling's Trace value of 0.210 ($p < .05$). Therefore, a significant difference exists between FFA members and non-members with regard to their opinions of FFA programs and services.

Table 1 shows the responses of members and non-members with respect to their opinion of the effectiveness of FFA programs and services in meeting their needs for leadership, personal growth and career success. Most FFA members in the study agreed with the concept that the FFA teaches necessary leadership skills, producing a mean score of 3.18 (SD = 0.51) for this item on the instrument. FFA members agreed in their opinions as to the effectiveness of the FFA in teaching communication skills, although the mean score for this item was slightly less at 3.15 (SD = 0.60). Furthermore, the majority of FFA members agreed that traditional FFA leadership topics such and parliamentary procedure and public speaking were interesting, producing a mean score for this item of 2.73 (SD= 0.81). Non-members rated leadership topics such as parliamentary procedure and public speaking lowest among this series of items (M=2.5, SD=0.84). The most favorable response from the non-members was in the FFA organization's ability to help students learn communication skills (M=2.90, SD=0.67). Table 1 reports the responses of students to the FFA programs and services items related to leadership development.

Both FFA members (M=3.17, SD=0.58) and non-members (M=2.93, SD=0.71) in the study rated the ability of the FFA to help people with their educational goals highly, although non-members in the study reported a significantly lower opinion of the FFA's ability to help students with their educational goals (M=2.93, SD=0.71), and with the concept that FFA can help students improve their grades in school (M=2.62, SD=0.73). The FFA members reported that FFA programs offer a great opportunity for travel (M=3.16, SD=0.59). For the majority of members, FFA programs build self-confidence (M=3.13, SD=0.58) and recognize members for their achievements (M=3.00, SD=0.68). Finally, members agreed with the idea that the FFA helps students improve their grades in school (M=2.92, SD=0.77). Furthermore, non-members in the study reported significantly lower opinions of the FFA organization's ability to offer important personal growth opportunities through its travel (M=2.84, SD=0.76) and award programs (M=2.66, SD=0.77).

The FFA members in the study agreed with the idea that the FFA does indeed help students make career choices (M=3.25, SD=0.52). Furthermore, FFA members in the study reported that the FFA helps students to made better decisions whether it involves school or career choice (M=3.10, SD=0.67). Although still somewhat positive, non-members in the study provided significantly lower mean scores in their opinion that the FFA helps students make better academic and career choices (M=2.90, SD=0.68).

Table 2 describes students' responses on the questionnaire with regard to their overall perception of FFA programming. FFA member's opinions did not rank very highly in this particular section when compared to their scores on previous items. The FFA members agreed that FFA activities were held at a convenient time and location(M=2.72, SD=0.73) and that these activities were adequately publicized (M=3.03, SD=0.73). The non-members in the study held significantly lower opinions of the idea that FFA activities are held at a convenient time and location (M=2.51, SD=0.81) and were well publicized (M=2.80, SD=0.80).

> There were no significant differences identified in the interaction effects between FFA membership status, gender and ethnicity. FFA membership status and prior enrollment and enrollment choice in an agriculture class had no significant effect the opinions of students. A school's block scheduling status did not significantly influence the respondents' opinion of the FFA programs and services. Furthermore, the interaction effect of FFA membership status and block scheduling did not yield significant differences.

Table 1
Perceptions of Members and Non-Members Regarding FFA Leadership, Personal Development and Career Development Programs.

Survey Instrument Items	Members (n=168)		Non-Members (n=236)		F
	Mean	Std. Dev.	Mean	Std. Dev.	
The FFA provides help in choosing a career.	3.25	0.52	2.98	0.64	17.41*
The FFA teaches leadership	3.18	0.51	2.89	0.74	16.13*

skills necessary for success in life.					
The FFA helps people with their educational goals.	3.17	0.58	2.93	0.71	11.18*
The FFA offers students with a great opportunity to travel.	3.16	0.59	2.84	0.76	16.78*
FFA activities help students learn to communicate better.	3.15	0.60	2.90	0.67	11.63*
The FFA helps students be more self-confident.	3.13	0.58	2.96	0.71	5.34*
FFA activities help students made better decisions regarding school and work.	3.10	0.67	2.90	0.68	6.47*
FFA members get a lot of attention when they win awards.	3.00	0.68	2.66	0.77	16.38*
FFA activities help students improve their grades.	2.92	0.77	2.62	0.73	11.18*
The FFA leadership topics like parliamentary procedure and public speaking are interesting.	2.73	0.81	2.50	0.84	5.63*

*p<.05. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree

Table 2
Perceptions of Members and Non-Members of Overall Programs and Services.

FFA Personal Development Items	Members (n=167)		Non-Members (n=236)		F
	Mean	Std. Dev.	Mean	Std. Dev.	
FFA activities seem to be well organized and publicized.	3.03	0.73	2.80	0.80	6.95*
The FFA encourages	2.97	0.68	2.90	0.67	0.95

students to get a job in the agriculture industry.					
FFA activities such as contests are too complicated for me.	2.96	0.82	3.14	2.67	.058
FFA activities are held at a convenient time and location for me to attend.	2.72	0.73	2.51	0.81	5.15*

*p<.05. 1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree

A Pearson Product Moment Correlation Coefficient of 0.08 (p=.13) for the correlation between perceptions of FFA programs and services and the respondent's grade level was generated. Based upon these results, there is not a significant relationship between the respondents' grade level and their opinions of FFA programs and services. Another Pearson Product Moment Correlation was computed to test the significance of the relationship between the respondents' level of participation in other school organizations on their opinions of FFA programs and services. A correlation coefficient of 0.09 (p=.15) for FFA programs and services were generated. There was no significant relationship found between the respondents' level of participation in other school organizations and their opinions of FFA programs and services.

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

> Conclusion 1: A student's decision to join or not join the FFA is influenced by their perceptions of the effectiveness of FFA programs and services in their school.

FFA programming makes a difference in a student's decision to join the FFA. In general, FFA members' responses to items related to the effectiveness of FFA programs and services were significantly more positive than the responses of non-members. However, it must be noted that non-members did perceive some FFA programs and services to be of value even though they chose not to become members.

Conclusion 2: A student's gender and ethnicity do not influence their perceptions of FFA programs and services.

Students' responses to items on the questionnaire were not significantly influenced by gender and ethnicity. The FFA has developed numerous recruiting materials in recent years that not only represent the current ethnic and gender characteristics of the membership, but also portray what FFA membership could be if it were more diverse in ethnicity and gender.

Conclusion 3: Voluntary enrollment in an agriculture class and prior enrollment in an agriculture class does not influence a student's perceptions of the FFA programs and services.

This study did not find that student's enrollment choice or prior enrollment in an agriculture class made a significant difference in their decision to join or not join the FFA. Students who are involuntarily enrolled in an agricultural class may not necessarily be adverse to joining the FFA, just as students who voluntarily enroll in an agriculture class are not necessary motivated to join the FFA.

Conclusion 4: Block scheduling does not influence a student's perceptions of FFA programs and services.

Once considered to be an obstacle in the planning and implementation of FFA activities (Becton, 1996), block scheduling did not influence students' decision to the extent that it either encourages or discourages membership. North Carolina schools have been utilizing block scheduling for a number of years, and perhaps FFA advisors have begun effectively recruit and retain FFA members under the system. Because a low number of students were on a traditional schedule, it would be imprudent to generalize the results of the analysis of this research question to the entire population of students that were enrolled in Agriscience Applications in the spring of 1999.

Conclusion 5: Grade level does not influence a student's perceptions of the FFA programs and services.

Grade level does not appear to be a factor in predicting student participation in FFA programs and services.

Conclusion 6: The scope of participation in school clubs and formal athletic activities does not influence a student's perceptions of FFA programs and services.

The scope of participation in school clubs and organizations might be effective in characterizing the students who might join and participate in FFA activities, but it does not singularly affect a student's opinions of FFA programs and services.

The results of this study are supported in the literature by Maslow (1970). At an age when most students are becoming eligible for FFA membership, they are also entering a period of human growth and development characterized by a need for contact, intimacy and a sense of belonging. The implications are significant for the FFA and agricultural education in that students tend to join and participate in the FFA based upon the organization's ability to meet a student's need for a sense of belonging. The results of this study indicate that non-members often agreed with members in their assessment of FFA programs and services. Apparently, there must be a very highly perceived value of programs and services in order for students to join the FFA. The FFA should continue to seek ways to involve all members in positive personal growth activities that allow students to experience that sense of belonging. Based upon the responses of members, the social aspects of the organization were motivating factors in their desire to be members.

Overall, FFA members believed that the FFA provides valuable assistance in helping students choose a career and also helps students help achieve their educational goals.

Many of the programs and services offered by the FFA are designed to encourage individuals to succeed. For students motivated by achievement, FFA activities are available that are challenging and can maintain a high level of interest without being unattainable. For those students that are motivated by a desire to avoid failure, the FFA provides programs and services with multiple difficulty levels so that students do not become discouraged. As a result, the FFA might wish to commit resources to the development of new products and services that more closely parallel students' interests and needs.

Non-members generally held a lower opinion of FFA programs and services than FFA members. Perhaps the slow evolution of FFA career development events and other awards programs in North Carolina has caused the FFA to fall behind in technology, therefore driving away students who might otherwise be interested in becoming a member. The FFA organization may be able to recruit new members if they offer activities that meet and exceed the expectations of non-members. FFA organization's educational programs could be revised to permit a closer relationship with instruction in the agricultural sciences. Learning activities could be packaged in a way that creates value beyond the cost of FFA membership dues.

The findings that emerged from this study led to certain recommendations pertaining to future research. Additional research is suggested in the area of FFA programs and services. An in-depth study into the various programs such as career development event, proficiency awards, and scholarships, would identify potential areas of weakness. Although FFA members indicated that FFA programs and services helped them reach their educational and career goals, additional research is needed to determine which programs are more effective.

To assist with recruitment and retention, additional research should be conducted into determining the most effective methods for planning and implementing FFA activities. These results might be particularly useful to teacher education responsible for preparing agriculture teachers for field service.

One general recommendation emerged from this study. It is recommended that the National FFA Organization create within its business structure a research and development division. The purpose of this new division would be to constantly evaluate the effectiveness of the FFA in achieving its mission and goals, and to provide research findings to state FFA associations and state agencies responsible for agricultural education programs. Regardless of the method employed by the National FFA Organization, it is essential that an ongoing evaluation process be in place and operational.

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Vocational Aspirations, Work-related Experiences, and Early Career Choice Patterns of Work-Bound Youth During Early Adolescence

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Abstract
A national longitudinal database (NELS: 88-94, 1996) was used to describe and compare the occupational aspiration patterns and work-related experiences of adolescents identified as work-bound or college-bound two years after the initial transition from high school to work or postsecondary education. Adolescents' occupational aspirations, vocational preparation, and work were analyzed at two separate points—Grades 8 and 10. Grade 8 and 10 achievement profiles of work- and unemployment-bound youths were similar; both groups had significantly lower achievement scores than college-bound youths. College-bound students had a more internal locus of control than work- or unemployment-bound groups. Socioeconomic status (SES) had considerable influence on determining post-secondary transition status. Two-thirds of all young adults who were work-bound or unemployed/out of the work force were in the lowest two SES groups. Adolescents in the highest SES were four times more likely to be college-bound. Work-bound youths did not engage in higher levels of school-based work preparation than college-bound peers. Occupational aspirations of college-bound youth were relatively stable over a two-year period, while those of non-college-bound youths were volatile. Occupational aspirations appear to be relatively well established by Grade 8 and do not change significantly after that time.

Significance, Theoretical/Conceptual Base, and Related Literature

Work-bound youth are a unique, often overlooked, segment of the adolescent population characterized by their decision to enter the labor market immediately on leaving secondary school. Historically, schools in the U.S. have given little attention to the career development needs of noncollege-bound youth because of the diffuse and general goals of public education, traditional separation of school and workplace, and societal attitudes that favor college attendance (Herr, 1996). Likewise, career development theories have been criticized for focusing attention on only the most economically and educationally advantaged youth (Worthington & Juntunen, 1997). As a result, many work-bound youth struggle. "Indeed, most work-bound youths are figuratively set adrift when they leave the secondary school, having little direct help or support as they attempt to navigate the school-to-work transition" (Herr & Niles, 1997, p. 139). Lack of career preparation, guidance, and support for work-bound youth can result in a process of floundering, drifting from one job to another, trial and error, early and lingering unemployment, working at jobs without opportunity for advancement, and general despair that may carry into adulthood (Herr, 1995).

> Few clear descriptions of work-bound youth are found in the literature due perhaps, in part, to the diversity found in the social and economic levels, gender, racial and ethnic backgrounds, and intellectual abilities of this population (Herr & Niles, 1997). Additionally, available descriptions have usually relied on high school seniors who declare their intentions of going directly to work after graduation rather than adolescents who actual make that type of transition. While important, self-reported transition path is not always a reliable indicator of actual transition experience.

From a theoretical perspective, questions have been raised about the applicability or relevance of traditional career development theories to work-bound adolescents. Several authors (e.g., Blustein et al., 1997; Worthington & Juntunen, 1997) have formulated tentative theoretical positions based on the interdisciplinary nature of the transition from school to work, indicating a need to incorporate psychological, sociological, and economic perspectives. Therefore, several theories were used to identify variables for inclusion and provide tentative explanations on how these variables might influence the career behavior of work-bound youth during early adolescence including Super's (1990; Super, Savickas, & Super, 1996) developmental self-concept theory, a sociological perspective/status attainment theory (Hotchkiss & Borow, 1996; Jencks, Crouse, & Muesser, 1983), and social cognitive learning theory (Lent, Hackett, & Brown, 1996).

Statement of the Problem

Given the limited information about work-bound youth in early adolescence, I used longitudinal data to describe and compare occupational aspiration patterns and work-related experiences of male and female adolescents who were actually identified as either work- or college-bound two years after the initial transition from high school to work or postsecondary education. Potential differences in adolescents' occupational aspirations, vocational preparation, and work were analyzed at two separate points—Grades 8 and 10. Based on prior research, I hypothesized that work-bound adolescents would express lower occupational and educational aspirations than college-bound peers, and that males would express lower aspirations than females. I also anticipated that work-bound youths would report greater participation in vocational education, part-time work, and other occupational preparation activities in Grade 10 than college-bound counterparts.

Method

Sample

The NELS:88 database administered by the National Center for Educational Statistics, U. S. Department of Education was used. NELS:88 represents a national probability sample of over 24,000 adolescents followed at 2-year intervals since 1988 (Ingels et al., 1992, 1994; Owings et al., 1994). The NELS:88 is particularly well-suited for studying the transitions of different types of students from eighth grade through young adulthood. At the time of the most recent data collection (i.e., 1994), the student cohort had been out of high school for a period of two years. A total weighted data pool of 14,3767 young adults—6,370 work-bound and 6,949 college-bound youths—was obtained.

Variables Conceptualization and Specification

A number of descriptive variables for the sample were identified including gender, socioeconomic status (SES), postsecondary educational and occupational status/ attainment, locus of control, self-esteem, academic achievement (reading, mathematics, science), vocational education coursework, part-time work experience, and educational and occupational aspirations (see Tables 1 and 2). The terms *work-bound* and *college-bound* were defined as individuals primarily employed and those primarily enrolled in school regardless of their employment status. A third status, *unemployed or out of the workforce* was also included.

Table 1

Demographic Characteristics of Work-bound and College-bound Adolescent Cohorts

	Work-bound adolescents				College-bound adolescents				Unemployed			
	Female		Male		Female		Male		Female		Male	
	n	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)	*n*	(%)
Race/ethnicity												
Asian American	53	1.9	84	2.3	191	5.2	179	5.4	11	1.6	10	2.7
African American	365	13.2	473	13.1	431	11.8	336	10.2	155	22.3	156	43.0
Hispanic	381	13.7	440	12.2	298	8.2	286	8.7	139	20.0	45	12.4
White	1,915	69.0	2,505	69.7	2,686	73.7	2,477	75.0	343	49.4	124	34.2
Other	35	1.3	56	1.6	25	.7	15	.5	34	4.9	21	5.8
SES												
Quartile 1 (low)	959	34.6	1,131	31.5	500	13.7	325	9.8	324	46.6	150	41.3
Quartile 2	831	30.0	1,012	28.2	738	20.2	578	17.5	127	18.3	94	25.9
Quartile 3	582	21.0	801	22.8	937	25.7	888	26.9	108	15.5	45	12.4
Quartile 4 (high)	271	9.8	353	9.8	1,342	36.8	1,415	42.8	53	7.6	48	13.2
Locale												
Rural	938	33.8	1,183	32.9	971	26.6	837	25.3	193	27.8	93	25.6
Suburban	1,012	36.5	1,310	36.4	1,454	39.9	1,451	43.9	231	33.2	94	25.9
Urban	705	25.4	908	25.3	1,136	31.2	963	29.2	162	23.3	137	37.7
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Reading ach												
Grade 8	48.72	8.44	47.90	8.38	55.11	9.15	53.33	9.36	46.82	8.25	47.52	8.22
Grade 10	48.32	8.52	46.86	8.96	54.48	8.65	53.35	9.34	46.33	8.54	46.35	8.73
Mathematics ach												
Grade 8	47.61	8.06	48.73	8.17	54.46	9.20	55.03	9.72	46.43	7.85	48.57	8.32
Grade 10	46.98	8.49	47.47	8.85	54.23	8.75	55.17	9.10	45.24	8.94	46.95	8.86
Science ach												
Grade 8	47.83	8.03	49.88	8.98	53.07	8.89	55.17	9.87	46.71	8.07	48.42	9.04
Grade 10	46.85	8.25	49.11	9.10	52.46	8.89	55.63	9.49	45.96	8.54	48.27	9.59
Self-concept												
Grade 8	-.18	.65	.07	.55	.00	.61	.20	.58	-.12	.60	.04	.58
Grade 10	-.15	.69	.02	.60	.00	.66	.17	.63	-.08	.66	-.01	.55
Locus of control												
Grade 8	-.14	.61	-.03	.56	.15	.54	.13	.56	-.16	.61	-.17	.61
Grade 10	-.11	.61	-.09	.61	.16	.61	.11	.59	-.18	.69	-.17	.56

Note. Totals may not equal 100.0% due to missing or incomplete data or rounding error. Percents represent column totals based on gender x transition path status.

Table 2
Work-related Characteristics and Preparation of Work-bound / College-bound Cohorts

	Work-bound adolescents				College-bound adolescents				Unemployed			
	Female		Male		Female		Male		Female		Male	
	n	(%)	*n*	(%)	*n*	(%)	*N*	(%)	*n*	(%)	*n*	(%)
High school program												
College preparation	539	19.4	611	17.0	1,692	46.4	1,513	45.8	91	13.1	49	13.6
General education	1,367	49.3	1,693	47.1	1,438	39.5	1,202	36.4	288	41.4	162	44.7
Vocation-technical	326	11.8	556	15.5	172	4.7	221	6.7	106	15.2	37	10.2
Other programs	543	19.6	735	20.5	343	9.4	367	11.1	210	30.4	115	31.5
Participation in vo-tech												
No prior involvement	417	19.0	567	21.9	927	28.8	870	30.8	64	17.6	49	24.5
Course(s), not in track	1,542	70.1	1,655	63.9	2,182	67.8	1,800	63.7	250	68.3	135	66.9
Vocational track	240	10.9	369	14.3	108	3.4	156	5.5	52	14.1	17	8.7
Part-time work experience												
No work experience	1,036	42.8	944	32.4	1,673	47.8	1,162	37.3	261	57.1	107	46.4
Past work, unemployed	703	29.1	1,067	36.6	949	27.2	1,104	35.4	130	28.7	84	37.0
Currently employed	681	28.1	906	31.1	882	25.2	850	27.3	65	14.2	38	16.7
Grade 8 occupational asp.												
College degree required	921	44.9	713	30.1	1,809	65.1	1,142	59.2	136	30.0	77	32.6
HS diploma, some college	442	21.6	1,134	47.8	435	15.6	663	27.2	126	27.8	84	35.6
Less than HS diploma	404	19.7	176	7.4	259	9.3	86	3.5	95	21.0	12	5.1
Don't know	284	13.9	349	14.7	278	10.0	243	10.0	96	21.2	63	26.7
Grade 10 occupational asp.												
College degree required	1,248	54.4	1,158	39.1	2,423	76.1	1,962	69.6	257	44.7	120	42.1
HS diploma, some college	408	17.8	1,228	41.5	346	10.9	548	19.4	98	17.0	107	37.5
Less than HS diploma	286	12.5	208	7.0	132	4.1	54	1.9	114	19.8	28	9.8
Don't know	351	15.3	366	12.4	284	8.9	256	9.1	106	18.4	30	10.5
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Grade 8 occupational asp.	43.98	12.9	43.06	12.1	47.93	10.8	48.14	11.3	42.50	12.0	44.67	11.0
Grade 10 occupational asp	50.97	15.7	46.50	15.5	55.77	12.2	54.07	12.0	48.81	17.5	46.01	14.7
Grade 8 educational asp.	3.47	1.0	3.35	1.0	4.17	.7	4.10	.8	3.24	1.1	3.04	1.2
Grade 10 educational asp	3.29	1.0	3.14	1.0	4.21	.8	4.09	.8	2.79	1.2	2.90	1.2

Note. Totals may not equal 100.0% due to missing or incomplete data or rounding error. Percents represent column totals based on gender x transition path status.

Data Analysis

Demographic and descriptive data were analyzed using chi-square and one-way analysis of variance (ANOVA) procedures. Given the unusually large sample size employed in this study, significant ANOVA results were further explored with calculation of effect size. Effect size (*d*) provides a measure of the magnitude of observed differences between two or more mean scores expressed in terms of standard deviation units (Cohen, 1988). Two-way frequency tables were constructed and analyzed with chi-square tests of association to determine the influence of postsecondary transition status on select work-related experiences (high school program, participation in vocational education courses, part-time work experience), occupational aspirations expressed in Grades 8 and 10, and the stability of occupational aspirations from Grade 8 to 10.

Findings

Descriptive Analyses of Participants

Socioeconomic status. Chi-square analysis examined the potential differences in socioeconomic status (in Grade 10) of adolescents' taking different transition paths. SES had a substantial effect on individuals' eventual transition path (postsecondary status), $\chi^2(6)=2{,}376.14$, $p<.00001$. Two-thirds of all young adults who were work-bound or unemployed/out of work were in the lowest two SES quartiles in Grade 10, while two thirds of all college-bound participants were found in the highest two SES quartiles.

Academic achievement and personality measures. Differences in Grade 8 and 10 academic achievement and personality measures based on student transition path (see Table 1) were observed: Grade 8 reading, $F(2, 14{,}373)=884.84$, $p<.0001$, mathematics achievement, $F(2, 14{,}373)=1{,}030.34$, $p<.0001$,and science achievement, $F(2, 14{,}373)=641.62$, $p<.0001$. Bonferroni post hoc analysis showed a majority of paired contrasts were also statistically significant. Effect size coefficients revealed practically important differences on reading ($d=.69$, .83, respectively), mathematics ($d=.76$, .88), and science achievement tests ($d=.58$, .77). Academic achievement of work-bound and unemployed adolescents were similar. The magnitude of paired contrasts on Grade 8 reading ($d=.14$), mathematics ($d=.13$), and science ($d=.13$) achievement were negligible.

College-bound adolescents scored significantly higher on Grade 10 achievement tests—reading, $F(2, 14{,}373)=1{,}016.76$, $p<.0001$, mathematics, $F(2, 14{,}373)=1{,}350.74$, $p<.0001$,and science achievement, $F(2, 14{,}373)=804.47$, $p<.0001$— than work-bound and unemployed peers. Differences in achievement scores of college-bound and work-bound or unemployed sophomores on reading ($d=.74$, .87, respectively), mathematics ($d=.84$, 1.00), and science scores ($d=.65$, .80) were large and of considerable practical importance. Differences between work-bound and unemployed groups was quite small and of limited practical value (reading, $d=.13$, mathematics, $d=.16$, and science, $d=.15$).

College-bound youths reported a more internal locus of control than noncollege-bound peers. Finally, while measures of self-esteem were statistically significant, follow-up measures of effect size indicated the differences to be of only minimal importance.

Work-Related Characteristics and Preparation

High school program. One indicator of adolescents' preparation for making the transition to postsecondary environments is high school education program. Do enrollment patterns differ for college-bound and work-bound youths? Chi-square analysis revealed that significant differences do exist (see Table 3). Almost half of college-bound adolescents were enrolled in college preparatory programs.

Involvement in secondary vocational education. Analysis of adolescents' enrollment in secondary vocational education indicated some differences in course-taking patterns, although two-thirds of all students, regardless of transition path, reported participation in at least one vocational course through Grade 10.

Part-time work experience. Significant differences in the work experience of the three student groups were indicated. While slightly over one-half of the sample reported some current or prior work experience, 53.7% of unemployment-bound participants had no work experience at the time of questionnaire completion.

Occupational Aspirations

Chi-square analysis indicated statistically significant differences in Grade 8 occupational aspirations among college-, work-, and unemployment-bound participants. A majority of college-bound youth reported high prestige occupational aspirations. Noncollege-bound adolescents were twice as likely to report moderate or low prestige aspirations. The statistically significant differences in occupational aspirations expressed during Grade 8 appeared to solidify and widen in Grade 10. Eighty percent of college-bound youth expressed high prestige occupational aspirations, compared to only half for work- and unemployment-bound peers. Over one-third of work-bound youth held moderate prestige aspirations, which was twice the rate of college-bound adolescents.

Table 3

Observed and Expected Frequencies and Adjusted Residuals for Two-Way Models of Effects of Postsecondary Transition Path on Work-Related Experiences and Aspirations

	Postsecondary transition path								
	College-bound			Work-bound			Out of workforce		
	Obs *f*	Exp *f*	Adj res	Obs *f*	Exp *f*	Adj res	Obs *f*	Exp *f*	Adj res
High school program									
College preparatory	3205	2204.3	36.3	1,149	1986.7	-30.6	140	304.0	-11.8
General education track	2641	3016.4	-12.8	3,060	2718.6	11.7	450	416.0	2.3
Vocational track	393	695.4	-16.9	883	626.8	14.4	142	95.9	5.2
Other /Special programs	592	914.4	-16.1	1,064	824.2	12.0	209	126.1	8.2
Participation in vocational education									
None (no participation)	1797	1534.1	11.3	984	1216.1	-10.1	114	144.2	-3.0
One or more courses, not in track	3982	4009.2	-1.1	3197	3178.2	.8	385	376.9	.8
Vocational track (multiple courses)	264	499.1	-16.0	609	395.6	14.7	69	46.9	3.5
Part-time work experience									
No work experience	2834	2713.0	4.4	1980	2187.6	-7.6	367	281.3	6.9
Past work experience, unemployed	2053	2114.3	-2.4	1770	1704.8	2.5	216	219.2	-.3
Currently employed	1732	1791.4	-2.4	1587	1444.4	5.8	103	185.8	-7.3
Occupational aspirations in grade 8									
College degree required	3251	2654.7	25.4	1634	2143.6	-21.9	213	300.1	-7.9
HS diploma required, some college	1097	1501.4	-18.3	1576	1212.3	16.6	211	169.8	3.9
Less than HS diploma required	344	536.7	-12.7	580	433.3	9.8	107	60.7	6.5
Occupational aspirations in grade 10									
College degree required	4386	3652.5	30.1	2406	3032.0	-26.0	377	483.4	-8.7
HS diploma required, some college	894	1393.4	-22.2	1637	1157.1	21.5	205	184.5	1.8
Less than HS diploma required	186	418.8	-16.9	495	347.7	10.8	141	55.4	12.5
Stability of occupational aspirations									
Consistent from grade 8 to grade 10	2773	2456.1	15.1	1599	1839.4	-11.6	185	261.9	-7.9
Raised from grade 8 to grade 10	797	920.2	-6.8	786	689.1	5.4	125	98.1	3.1
Lowered form grade 8 to grade 10	350	505.1	-10.9	499	378.3	8.6	89	53.9	5.2
Undecided in grades 8 and 10	104	142.9	-4.9	130	107.0	2.9	31	15.2	4.3

Note. Totals may not equal 100.0% due to missing or incomplete data or rounding error. Percents represent column totals based on gender x transition path status.

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A final analysis examined the stability of reported occupational aspirations from Grade 8 to Grade 10. Two criteria were used to classify participants into one of four possible outcomes—consistency in expressed occupational aspirations over time, raised or lowered aspirations, and individuals who remained undecided about occupational aspirations. Significant differences in the developmental trends existed. Two-thirds of college-bound adolescents (68.9%) reported no change in the prestige level of their expressed occupational aspirations. In contrast, only about half of work-bound youth (53.1%) and 43.0% of unemployment-bound youth expressed stable aspirations based on prestige.

Table 4
Developmental Trends of Occupational Aspirations During Early Adolescence

Observed trends	Postsecondary transition path					
	College-bound		Work-bound		Out of workforce	
	N	%	*n*	%	*n*	%
Consistent aspirations	2773	68.9	1599	53.1	185	43.0
Raised aspirations	797	19.8	786	26.1	125	29.1
Lowered aspirations	350	8.7	499	16.5	89	20.6
Undecided in Grades 8 and 10	104	2.6	130	4.3	31	7.3
Totals	4024	—	3014	—	429	—

Note. Totals may not equal 100.0% due to missing or incomplete data or rounding error. Percents represent column totals based on gender x transition path status.

Conclusions and Implications

The descriptive characteristics of work-, college-, and unemployment-bound youth included in this analysis confirmed past reports of distinctions in the academic achievement of these groups (e.g., Choy, Alt, Henke, 1994; Herr, 1995, Herr & Niles, 1997). The Grade 8 and 10 achievement profiles of work- and unemployment-bound youths were similar; both groups had significantly lower achievement scores than college-bound youths. What was not determined from this study was how the relationship between lowered academic achievement and work-bound (or unemployment-bound) status evolves. "

College-bound students held a more internal locus of control than work- or unemployment-bound groups suggesting a greater ability to gather occupationally-relevant information and take personal responsibility for making career choices. More direct, purposeful, and early preparation and support might be helpful to noncollege-bound youths as they explore career alternatives and begin to make academic-related decisions (e.g., selecting a college-prep or vocational track).

Socioeconomic status had a considerable influence on determining postsecondary transition status, supporting a status attainment or sociological perspective (Gottfredson, 1996; Hotchkiss & Borow, 1996). Super (1990) explained that SES influences career decision-making and attainment by opening or closing opportunities, and shaping occupational- and self-concepts. The influence of discrimination or systemic patterns of education placements based on SES were not studied but are other possible explanations for the very clear differences revealed. It is possible, from a social cognitive perspective, that young people in the lowest SES quartiles experience negative reactions and lowered expectations from educators and community. These perceptions can impose lower status devalued roles for individuals, resulting in lowered career aspirations and attainment often characterized by narrow, stereotypical employment possibilities. While classroom-based interventions cannot eliminate the negative effects of low SES, professionals might seriously consider their expectations, biases, and preconceived ideas about the employment potential of individuals from lower social class backgrounds and examine how these perceptions might affect the delivery of intervention programs to these individuals.

The relatively high percentage of adolescents reporting either no work experience or past work experience was not unexpected given the age of participants. However, the work experience of unemployment-bound youths was strikingly different from the other groups. One-half of the unemployment-bound group reported no work experience. Only 15% of this group were currently employed, half the rate of other groups. Additional research on this often overlooked group of young people—those who remain unemployed or consider themselves out of the workforce— appears needed to identify and address their seemingly unique experience.

College-bound youth consistently reported higher occupational aspirations than both noncollege-bound groups. In Grade 8, noncollege-bound youth are twice as likely as college-bound peers to express moderate or low prestige aspirations. Differences in aspirations were more pronounced in Grade 10. Four out of five college-bound youths held high prestige occupational aspirations. Approximately one-third of work-bound youth held moderate aspirations. Adolescents in the unemployment-bound group were six times more likely to express low prestige aspirations than college-bound peers. Finally, when examined over a two-year period, the aspirations of college-bound youths were more likely to remain stable, while the aspirations of noncollege-bound adolescents were much more likely to change. Additional study to clarify the applicability of career development theories (e.g., Super, 1990; Super et al., 1996) to noncollege-bound youth appears warranted.

These results, along with past studies, provide a clearer picture of the development of occupational aspirations in adolescents based on their actual postsecondary transition path. How is this information useful? First, it is important to remember that occupational aspirations are not necessarily indicators of eventual attainment. However, the study of aspirations is important as they have considerable psychological meaning and predictive value in terms of identifying future educational and career options.

Second, lowered aspirations are not necessarily negative and may actually be an accurate and realistic assessment of personal abilities and skills. However, lowered aspirations may be negative when career development and educational opportunities are considered.

Early adolescence is a critical time for identifying tentative future goals and establishing initial plans designed to attain these goals. Lowered aspirations in the early exploration stage of career development may contribute to reduced or limited opportunities and reflect self-imposed limitations.

Perhaps the most important outcome of this study is knowledge that occupational aspirations appeared to be relatively established and stable in early adolescence. One practical implication of this finding is reflected in the apparent need for a comprehensive, longitudinal, and integrated approach to providing academic and career education and counseling opportunities. Given the considerable influence of SES postsecondary transition and aspirations, it appears that typical practice of introducing time-limited career development interventions for 8th and 9th grade students (e.g,. conducting a career day or offering an 8-week career awareness unit) may simply be a matter of too little, too late. Specific interventions should begin in the elementary school years and be sustained through secondary and postsecondary education.

While these results contribute to our understanding of the early occupational/career characteristics of college- and noncollege-bound adolescents, additional questions remain unanswered. For example, the potential of early and sustained school-based career interventions for enhancing the career development of all children and adolescents, particularly noncollege-bound, warrants investigation, e.g., Can career education programs make a difference in the occupational aspiration and attainment patterns observed here? Do systematic and long-term career interventions have a significant impact on eventual occupational or educational attainment?

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UNDERLYING FACTORS RELATED TO TEACHING EFFECTIVENESS AS PERCEIVED BY APPRENTICESHIP TRAINERS

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The purpose of this study was to identify factors underlying apprenticeship trainers' perceptions of teaching effectiveness. A proportionally stratified sample was utilized for this study. A two-part instrument measuring teaching effectiveness was administered to subjects attending a four-day seminar at Marshall Community and Technical College during Summer of 1999. Factor analysis resolved the 51 items into 10 factors. The following perceived factors of teaching effectiveness: communication and feedback, faculty/student interaction, and explanation of procedures/policies factors were highly significant among apprenticeship trainers. First and second year apprenticeship trainers were more likely to have low mean ratings for the 10 perceived factors of teaching effectiveness. This finding implies that these two groups have not received sufficient training in the area of teaching effectiveness. It was recommended that preservice training should be provided for prospective apprenticeship trainers in selected areas of teaching effectiveness identified in this study.

Introduction, Theoretical Base, and Related Literature

It is not an exaggeration to say that the educational literature on teaching effectiveness is a morass of ill-defined and changing concepts. Ask any experienced teacher, and he or she will tell you "teaching is no longer what it used to be." Whether they are postsecondary instructors, college professors, public school teachers, or others who work with students at all levels of education, the general belief is that the total quality of teaching is rapidly deteriorating (Nwagwu, 1998).

The major problems with research on teaching effectiveness are: definition, choice of criteria, and the selection of criteria measurements. As yet, there is no developed or organized theory of teaching effectiveness (Sikora, 1997). Teaching effectiveness has been defined as "the results a teacher gets…or the amount of progress the pupils make toward some specified goal of education" (Medley, 1982, p. 1894). It is theoretically impossible to measure a teacher's effectiveness by measuring only student achievement. There is no scientific method of separating what and how much a pupil learned from the teacher due to extraneous variables involved with student learning (Sikora, 1997).

Kindsvatter, Wilen, and Ishler (1988) addressed seven assumptions and beliefs basic to effective teaching. They are:

- The quality of teaching is directly contingent upon the quality of the decision making that precedes that teaching;
- Teaching is a complex behavior;
- Teaching is a learned behavior;
- Instruction should be based on the most effective strategies, methods, techniques, and behaviors as determined by current research and learning;
- Students must be motivated;
- The social settings in which instruction occurs is a major factor affecting that instruction, and
- Teaching in the final analysis is a personal invention (p.xvii-xx).

The National Center for Educational Statistics (1993) stated that:

> At the heart of the education process is the interaction between teachers and students in the classroom. The quality of this interaction is greatly influenced by a variety of factors, including backgrounds, qualifications, attitudes of the teachers, the instructional practices used in the classroom, the working conditions, administrative constraints that teachers face, and the characteristics of the students. (p.1)

Researchers have examined teacher personality traits, behaviors, attitudes, values, abilities, competencies, and many other characteristics. A host of measuring instruments have also been used: personality tests, attitude scales, observation instruments, rating scales, bipolar descriptors, and close-end written statements to understand what makes good teaching. The results of teaching, however, have been studied in terms of student achievement, adjustment, attitudes, socioeconomic status, and creativity (Nwagwu, 1998).

However, despite all these activities, none of these studies examined the factors underlying teaching effectiveness as perceived by apprenticeship trainers. The need for effective teaching in selected allied trades (industrial painting, wall covering, drywall finishing, floor covering, glazing, sign painting) is becoming increasingly more important, not only for the school and students, but for our advanced society. The cornerstone to a highly skilled workforce, requires that teachers/trainers must be effective in preparing students for their future roles.

Purpose and Objectives

The purpose of this exploratory study was to identify factors underlying apprenticeship trainers' perceptions of teaching effectiveness. Specifically, the objectives addressed were:

1. To describe the level of importance of teaching effectiveness as perceived by apprenticeships trainers.
2. To compare the perceived factors of teaching effectiveness among four groups of apprenticeship trainers.
3. To determine if significant relationships exist between factors of teaching effectiveness and selected variables as perceived by apprenticeship trainers.

Procedures

Population and Sample

The target population was apprenticeship trainers of allied trades from all 50 states and Canada. The accessible population for this exploratory study consisted of apprenticeship trainers (N = 306) who attended the annual International Brotherhood of Painters and Allied Trades (IBPAT) four-day seminar at Marshall Community and Technical College during Summer of 1999. A registration list of the four-day event was obtained from Marshall Community and Technical College and served as the frame for the study.

According to Krejcie and Morgan (1970), a sample size of 169 is needed to represent a population of 306 when a simple random sample is drawn. However, Tatsuoka (1982) cautions that when stratified samples are used, rather than simple random samples, smaller samples should be drawn to more accurately represent the population because the design effect is less than one for stratified samples. Therefore, the sample size recommended by Krejcie and Morgan was reduced from 169 to 150 and was drawn as a proportionally stratified sample composed of 48 first year apprenticeship trainers, 45 second year apprenticeship trainers, 30 third year apprenticeship trainers, and 27 fourth year apprenticeship trainers.

Instrumentation

Following a review of related literature a two-part questionnaire was developed by the researcher. The first part of the instrument asked participants to determine their perceptions of teaching effectiveness. A five-point Likert-type scale was used (1 = not applicable; 2 = unimportant; 3 = important; 4 = very important; and 5 = essential). Muller (1986) stated that using a scale with a middle category seems to work as well as a scale without a middle category. The second part of the instrument asked participants to provide pertinent demographic information.

Content and face validity for the instrument were established by a panel of experts consisting of university faculty, community college administrators, and business and industry personnel. Fourteen purposely selected adult and technical education graduate students served to establish reliability of the questionnaire. The resulting Cronbach's alpha reliability coefficient for internal consistency was .8817.

Data Collection

The instrument was administered by the coordinator of the seminar on the third day of this four-day event. However, this time period of administration proved to be less than ideal as indicated by a return rate of only 53% (79) useable questionnaires. Caution is warranted in generalizing the results beyond the accessible sample.

Analysis of Data

Data were analyzed with SPSS for Windows computer program. Appropriate statistics for description were used including frequencies, percentages, means, standard deviations, and Pearson's correlations. Davis' (1971) descriptors were used to interpret the correlation coefficients.

Coefficient	Description
.70 or higher	Very strong Association
.50 to .69	Substantial Association
.30 to .49	Moderate Association
.10 to .29	Low Association
.01 to .09	Negligible Association

Factor analysis (principal components with varimax rotation) was used to identify factors underlying apprenticeship trainers' perceptions of teaching effectiveness. Procedures for conducting the factor of analysis were patterned after those of McCaslin and Torres (1992). Analysis of variance was used to test for significant differences among the subsamples of apprenticeship trainers on their perceived factors of teaching effectiveness. When significant differences were observed, the Duncan's multiple range test was used to identify where differences existed.

Results

Demographic Characteristics of Respondents

Table 1 presents the demographic characteristics of respondents. The data on apprenticeship trainers indicated that a majority (89.9%) of the respondents were male, and 10.1% were female. The characteristics collected from apprenticeship trainers also revealed that over 30% fell within the 35-44 and 45-54 age bracket respectively. In addressing the educational level, almost two-thirds (62.0%) of the apprenticeship trainers reported having completed college credits beyond the high school level.

Table 1
Demographic Characteristics of Respondents (n =79)

Variable	Frequency	Percent
Gender		
Female	8	10.1
Male	71	89.9
	79	100.0
Age		
25-34	8	10.1

35-44	28	35.4

(table continues)

Table 1 (continued)

Variable	Frequency	Percent
45-54	27	34.2
55 and over	16	20.3
	79	100.0
Education		
High School Graduate with Technical Training	30	38.0
Some College	37	46.8
Associate Degree	8	10.1
Bachelor's Degree	3	3.8
Master's Degree	1	1.3
	79	100.0
Level of Classification		
First Year Apprenticeship Trainer	18	23.0
Second Year Apprenticeship Trainer	15	19.0
Third Year Apprenticeship Trainer	30	38.0
Fourth Year Apprenticeship Trainer	16	20.0
	79	100.0

Apprenticeship trainers reported an average of 16.26 years of employment (SD = 9.54) in their current or most recent occupation. Gordon and Yocke (1999) reported a similar finding for average years of employment on teaching effectiveness data of selected career and technical education teachers.

Level of Teaching Effectiveness

Table 2 provides information regarding apprenticeship trainers' perceived level of teaching effectiveness. Apprenticeship trainers agreed that it was "very important" (M = 4.50, SD = 0.73) for instructors to be at all schedule classes (item 15). Respondents were more likely to agree that it was "unimportant" (M = 2.65, SD = 0.98) for students to assist in composing test questions (item 35). Almost three-fourths (72.54%) of the items were rated as "important" (M = 3.01-3.97) by respondents.

Table 2

Means and Standard Deviations for Apprenticeship Trainers' Perceptions of Teaching Effectiveness (n = 79)

Abbreviated Items	M[a]	SD
1. Learn the name of each student.	3.82	1.08
2. Tell students by what name and title you prefer to be	3.84	1.00

called.		
3. Tell students about your background, interests, and so forth.	3.60	.93

(table continues)

Table 2 (continued)

Abbreviated Items	M[a]	SD
4. Provide note pad and pen on office door for student messages.	2.84	1.12
5. Stress positives, "I know you can do it" attitude.	3.94	.97
6. Be fair and impartial in dealing with student requests.	4.24	.75
8. Socialize with students by attending their social activities.	2.74	.94
9. Invite students to attend conferences, professional meetings etc.	3.23	.86
10. Coordinate students with off-campus services (counseling, legal aid, etc.) if they request help.	3.12	1.17
11. Listen to students' opinions and comments.	4.07	.82
12. Avoid quarrels over minor points with students in class.	3.96	.99
13. Encourage students to share life experiences in class.	3.22	1.13
14. Be in the classroom before students, and be the last to leave.	4.00	.98
15. Be at all scheduled classes.	4.50	.73
16. Teach a full class period on the first day.	3.72	1.02
17. Keep index cards with your student's names, phone #'s, etc.	2.92	1.08
18. Inform students and stress attendance policy.	3.94	1.12
19. Explain grading procedures.	3.87	1.03
20. Explain students' responsibilities.	3.92	.99
21. Display flexibility when scheduling make-up quizzes / tests.	3.20	.96
22. Insist that students contact teacher if prolonged absences.	3.45	1.15
23. Walk around the room as you talk or ask questions.	3.50	.99
24. Stress eye contact with students.	3.92	.84
25. Vary instructional techniques (videos, debates, lecture, etc.).	4.11	.76
26. At the beginning of class, state topics and objectives.	4.03	.77
27. Distribute outline of lecture or used overhead projector.	3.10	.99
28. Return papers, quizzes, and tests as soon as possible.	3.48	.89
29. Ask for students' evaluation of exams.	3.10	.94
30. Permit students' input about all aspects of class structure.	3.50	.89
31. Explain that instructor does not have all Ans. to all Q's.	3.72	.93
32. Give appropriate and considerate responses to questions.	4.00	.81
33. Be specific about acceptable and unacceptable behavior.	4.07	.93
34. Encourage students to have their peers review their work.	3.03	.91
35. Have students involved in composing test questions.	2.65	.98

36. Have students share experiences with placement, tutoring, etc.	2.88	1.06
37. Have students set semester goals for themselves.	3.21	1.09

(table continues)

Table 2 (continued)

Abbreviated Items	M [a]	SD
38. Use small groups when possible, and set goals from them.	3.46	.87
39. Meet with students who are not making progress.	3.83	1.00
40. Mention extra-curricular activities, encourage participation.	3.21	1.11
41. Interrelate subject matter with other academic disciplines.	3.22	.96
42. Use examples that reflect the experiences of all age groups.	3.72	.76
43. Place syllabi, lecture notes, study guides, etc., on public file.	3.01	1.06
44. Show enthusiasm for students and the subject matter.	4.16	.83
45. Set up individual meetings, special sessions where needed.	3.49	1.07
46. Maintain high academic standards.	3.97	.80
47. Periodically check student progress, and inform students standing.	3.68	1.04
48. Faculty knows student beyond just grades.	3.36	1.08
49. Invite guest speakers to class.	3.51	.93
50. Use other faculty member's skills as guest lecturers or to lead discussion.	3.38	.99
51. Confer with other faculty about learning needs of students.	3.49	1.02

Note. [a] Based on a scale: 1 = not applicable; 2 = unimportant; 3 = important; 4= very important; 5 = essential.

Comparison of Perceived Factors of Teaching Effectiveness Among Apprenticeship Trainers

Factor analysis resolved the 51 items into 10 factors. Only factors with eigenvalue equal to or greater than one were considered. To assist in the interpretation and to reduce subjectivity, only items with factor loadings of .4 or higher were considered for labeling factors. Means, standard deviations, and one-way analyses of variance for perceived factors of teaching effectiveness among four groups of apprenticeship trainers are reported in Table 3.

Table 3

Means, Standard Deviations, and Analysis of Variance for Perceived Factors of Teaching Effectiveness Among four Groups of Apprenticeship Trainers (n = 79)

	Group 1[a] (n = 18)	**Group 2[a]** (n = 15)	**Group 3[a]** (n = 30)	**Group 4[a]** (n = 16)			
Factor	**Mean** S.D.	**Mean** S.D.	**Mean** S.D.	**Mean** S.D.	F Ratio	F Prob.	**Pairs**
1. Faculty/Student Interaction	21.22 6.06	23.20 3.98	27.03 5.95	25.93 6.60	4.33	.0071	1-4*,1-3*
2. Classroom Management	23.55 3.61	22.60 3.97	23.73 3.54	25.12 3.05	1.33	.2680	2-4**
3. Explanation of Procedures and Policies	13.94 3.88	14.93 3.05	16.40 3.17	17.25 2.59	3.75	.0144	1-3*, 1-4*, 2-4*
4. Fosters Positive Individual Attention	20.72 2.69	18.80 4.12	20.96 2.96	22.00 2.60	2.89	.0406	2-3, 2-4*
5. Provision of Professional Development and Services	5.83 1.65	6.33 1.63	6.76 1.79	6.31 2.24	.98	.4038	
6. Enthusiasm	14.38 2.74	12.93 2.78	14.86 3.58	15.25 2.59	1.75	.1629	2-4*
7. Students Participate in Evaluation	12.88 2.51	13.93 2.40	14.30 2.43	14.25 2.74	1.32	.2716	
8. Socialize with Students	8.83 1.79	9.40 2.26	10.03 2.49	9.75 2.14	1.14	.3385	
9. Communication and Feedback	6.44 1.88	6.60 1.84	7.90 1.84	8.18 1.60	4.42	.0064	1-3*, 1-4*, 2-3*, 2-4*
10. Creates an Atmosphere for Respect	3.88 .96	3.60 .73	3.83 1.08	4.06 1.12	.55	.6470	

Note. [a] Group 1 = first year apprenticeship trainers; Group 2 = second year apprenticeship trainers; Group 3 = third year apprenticeship trainers; Group 4 = fourth year apprenticeship trainers.

*Denotes pairs of groups significantly different at $p < .05$ level with utilization of the Duncan's multiple range test.

**Denotes pairs of groups significantly different at $p < .10$ level with utilization of the Duncan's multiple range test.

Significant differences were observed among means on six of the ten factors of teaching effectiveness. Duncan's multiple range test was used to determine the nature of difference among the four groups of apprenticeship trainers. This analysis revealed that first year apprenticeship trainers were significantly different from fourth year and third year apprenticeship trainers on the "faculty/student interaction factor." The data also revealed that first year apprenticeship trainers were significantly different from third year and fourth year apprenticeship trainers on the "communication and feedback factor." Second year apprenticeship trainers also reported a similar pattern for the "communication and feedback factor." Apprenticeship trainers from the four different groups did not differ significantly on the following four factors: professional development services, participation of students in the evaluation process, socialize with students, and atmosphere for respect.

Relationship Between Factors of Teaching Effectiveness and Selected Variables.

Table 4 presents Pearson's correlations between selected demographic information (ie., gender, age, years employed in current occupation, level of education, level of classification) and perceived factors of teaching effectiveness. A low positive correlation was found ($r = .24$, $p < .05$) between gender and explanation of procedures/policies. There was also a low positive correlation ($r = .26$, $p < .05$) between age and feedback. Moderate positive correlations ($r = .33$, $r = .35$, $r = .36$, $p < .05$) were calculated respectively between level of classification (demographic variables), and the following perceived factors of teaching effectiveness: faculty/student interaction, explanation of procedures/policies, and feedback.

Table 4
Intercorrelations Between Selected Independent Variables and Perceived Factors of Teaching Effectiveness ($n = 79$)

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Gender	--	-.03	-.12	-.13	.01	.14	.08	.24*	.08	.09	.10
2. Age		--	.26*	.16	.31*	.06	.15	.13	.05	.08	.03
3. Employment			--	.04	-.03	.08	.02	-.03	-.08	-.07	-.16
4. Level of Education				--	.20	.12	.15	-.06	.08	-.05	.03
5. Level of Classification					--	.33*	.15	.35*	.18	.12	.14
6. Interaction						--	.41*	.46*	.27*	.42*	.37*
7. Classroom Management							--	.51*	.46*	.22	.37*
8. Policies								--	.48*	.41*	.42*
9. Individual Attention									--	.43*	.55*

10. Prof. Development	--	.47*
11. Enthusiasm		--
12. Evaluation		
13. Socialization		
14. Feedback		
15. Respect		

* Significant at .05 level of probability

Discussion and Conclusions

Based on the results of this study, the typical apprenticeship trainer:

1. is likely to be a male;
2. is likely to be in the age bracket of 35-54 years old;
3. completed some college credit hours; and
4. completed an average of 16 years of employment in current or most recent occupation.

Wellman (1999) cites a wide array of courses completed by apprenticeship trainers over four consecutive years at Marshall Community and Technical College. According to Wellman (1999), apprenticeship trainers received training in many different areas such as: occupational safety and health administration rules, scaffolding, lead abatment ergomics, respiratory training, and asbestos. Wellman (1999) further reported that apprenticeship trainers received college credits for their completed education and training courses.

In this study, apprenticeship trainers were more likely to rate the following statements as "very important" for teaching effectiveness:

- be at all schedule classes;
- be fair and impartial in dealing with requests;
- show enthusiasm for students and subject matter;
- listen to students' opinions and comments;
- be specific about acceptable and unacceptable behavior;
- at the beginning class(es), state topics and objectives; and
- give appropriate and considerate responses to questions.

> Overall, apprenticeship trainers' perceived level of teaching effectiveness was rated less than "essential." A study by Gordon and Yocke (1999) reported similar findings on teaching effectiveness of trade and industrial teachers.

Third and fourth year apprenticeship trainers were more likely to have higher mean ratings for the 10 perceived factors of teaching effectiveness when compared to first and second year apprenticeship trainers. This finding was probably attributed to the amount of inservice training completed by third and fourth year apprenticeship trainers at Marshall Community and Technical College.

The following perceived factors of teaching effectiveness: communication and feedback, faculty/student interaction, and explanation of procedures/policies factors were highly significant among apprenticeship trainers. The data seem to suggest that communication and feedback, faculty/student interaction, and explanation of policies and procedures are essential factors for assessing teaching effectiveness among apprenticeship trainers. Communication and feedback are essential tools for helping students understand cognitively what they are doing, what they should and should not be doing, and what adjustments should be made (Rink, 1993).

Selected results of the correlational analyses revealed that as the classification level of apprenticeship trainers increases, there was a tendency for: feedback ($r^2 = .13$), explanation of policies ($r^2 = .12$), and faculty/student interaction ($r^2 = .10$) factors to increase. DeBarros (1999) cites "faculty/student interaction" with students to be very rewarding for instructors who were nominated for the 1999 All-USA Teacher Team.

Implications and Recommendations

There was not a representative sample of female apprenticeship trainers in this study. This implies that there is a need to recruit and retain more female apprenticeship trainers. To increase participation, apprenticeship agencies should develop and circulate awareness and education materials to community based organizations.

Apprenticeship trainers rated almost three-fourths of the 51 items as important for an instructor to practice. This finding suggests that apprenticeship trainers value a majority of these selected factors of teaching effectiveness. However, items rated as "very important" should be utilized as measuring indicators for assessing teaching effectiveness of prospective apprenticeship trainers.

First and second year apprenticeship trainers were more likely to have low mean ratings for the 10 perceived factors of teaching effectiveness. It appears that first and second year apprenticeship trainers have not received sufficient training in the area of teaching effectiveness. Perservice training should therefore be available to prospective apprenticeship trainers in selected areas of teaching effectiveness identified in this study.

Career and technical preservice and inservice providers should conduct studies to determine the relationship between mentoring and teaching effectiveness of beginning apprenticeship trainers.

Improving teaching effectiveness is not merely a function of effective reward system, but rather a collaborative function of several factors working together to improve not only what goes on in the classroom but to improve quality of faculty. Apprenticeship trainers must learn a body of knowledge essential for teaching, how to prepare for instruction, and how to deliver instruction to become effective.

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Beyond the Success of the Students
Effects of Participation on School-to-Career Partners

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Abstract

The success of school-to-career (STC) initiatives hinge on partnership. Many aspects of the STC agenda depend upon the involvement of business, labor, parents, and other community agencies. While the benefits for students are well-established, what are the benefits for partners? History and common sense suggest that partners tend to invest in partnerships to the degree they get something out of them. As STC initiatives become more complex and face issues of maintaining and sustaining, the need to document relevant outcomes to partners becomes more acute.

Early research suggests that partners are initially drawn to educational partnerships on altruistic grounds, but sustained involvement requires tangible returns. Recent research has begun to quantify the returns that accrue to employer partners. The current study adds to that literature by documenting an array of benefits that accrue to an entire set of partners from business, labor, schools, and the community.

Using a comprehensive case study design, the authors analyzed the participation of primary partners in a complex STC initiative and the outcomes that accrued to them. The authors found that all partners gained significant, tangible, and valuable outcomes that went beyond those originally envisioned. Program sponsors and policy makers can use this information to bolster partnership development strategies and sustain long-term educational reform efforts.

A. Introduction, Significance, and Statement of the Problem

The success of school-to-career (STC) initiatives hinge upon partnerships. Two key ingredients of STC programs – paid work experience and work-based learning – can only be accomplished by involving the business and nonprofit communities. Other aspects of STC (e.g. integrated curriculum and alternative assessment), will not achieve their full potential without active involvement and support from education, business, labor, and parents. While the benefits for students are well-established, what are the benefits for partners?

Two frequently cited reasons employers have given for participating in educational partnerships are to prepare for existing or projected workforce skill shortages and to enhance community relations (McNeil and Kulick, 1995). More recent research suggests that employer partners actually expect a more immediate and tangible return on their investment (The Public Forum Institute, 2000; Ballen, et al., 1998; Bassi, et al., 1998).

As STC initiatives and their sustainability become more complex the need to document relevant outcomes to partners becomes more acute. Program managers and policy makers need to know what motivates partners and sponsors need to articulate what partners can realistically expect to get out of participation. Positive outcomes should encourage deeper levels of participation and extended commitment.

B. Theoretical/conceptual base and related literature

The enactment of the School-to-Work Opportunities Act of 1994 (STWOA) ushered in a new era of employer involvement in education reform and youth employment initiatives, and provided opportunities for increased parental involvement as well (Charner, 1997). Empirical evidence demonstrates that the STWOA is enhancing both the quantity and quality of employer participation in state and local efforts to prepare youth for employment, post-secondary education, and responsible citizenship (NES II, 1999; Wills, 1998; Bassi, et al., 1998).

The literature on STC partners tends to focus on employers. Several differences between old and new models of participation have been delineated (White and Rath, 1999; Kazis, 1998). In the old model, employers assumed few risks and reaped few, if any, long-range benefits. The new model shows employers engaged in "hands-on" activities, partnering with schools and parents to ensure that young people are better able to achieve their career aspirations. Employers are taking more risks and making strategic investments and realizing significantly higher returns on their investments (Ballen, et al. 1998; Bassi, et al. 1998, NIWL, 2000). The current study contributes to this literature by undertaking an examination the benefits that accrue to an entire set of school-business-community partners.

C. Research methods and procedures

We choose to examine a fairly sophisticated STC model that explicitly sought to build partnerships among business, labor, education, and parents. That model is known as the Lansing Area Manufacturing Partnership (LAMP). Partners include business (General Motors Corporation), organized labor (the United Auto Workers), the school district (Ingham [County] Intermediate School District, Michigan), and the parents and guardians of the participating students.

Now in its fourth year of operation, LAMP is well on the way to establishing itself as a model STC initiative. Its innovative business/labor-driven integrated curriculum, its emphasis on project-based learning, its team teaching structure, and the opportunity for staff and students to establish close, ongoing interaction with employees, distinguish LAMP among other STC programs. More importantly, LAMP has taken on one of the thorniest issues facing the STC community: building genuine, active, collaborative relationships between the public, educational sector and the private, employment sector. LAMP's partnership structure provides a dramatic example of how such relationships can be forged and sustained.

The data on which this report is based were collected between April 1998 and June 2000 using a case study methodology. Sources of data include:

- Observation of orientation, mentor meetings, Policy Board meetings, student experiences;
- Focus groups of students and employees;
- Interviews with LAMP instructors, mentors, subject matter experts, curriculum developers, adminstrators, and counselors;
- Reviews of program materials and records;
- Tours, video presentations, and telephone calls with partners; and
- Surveys of graduates of the Classes of 1998 and 1999, parents of the Class of 1999, and workplace personnel.

D. Findings

As a partnership, LAMP's overarching goal is to produce improved educational outcomes for students. In fact, an evaluation of LAMP (MacAllum, et.al., 1999) reported positive outcomes for participating students. But what outcomes accrue to the individual partners who invested their resources of time, energy, creativity, materials, and money? Our research found that all partners experienced significant, tangible, and valuable outcomes beyond those originally envisioned. These are examined in the remainder of this paper.

EFFECTS ON EMPLOYER AND UNION PARTNERS

The employer and union partners originally undertook the LAMP initiative with a fairly common goal of future-oriented enlightened self-interest. While not anticipating any immediate pay-off, they hoped that LAMP would eventually help the UAW and GM develop well-qualified manufacturing workers with a good understanding of the future of the industry. In practice, however, their participation led to additional, direct, and near-term impacts on the current workforce and workplace. Two categories of impacts are examined: individual and organizational.

PARTICIPATING PERSONNEL

☐ **Individuals felt personally enriched by the opportunity to help young people.**

Worksite personnel were enthusiastic about the opportunity to help young people and felt rewarded on a personal level when they did so. Employees pointed to the satisfaction and enjoyment they felt, the personal growth they experienced, and the great strides they made in terms of their own understanding of the issues that youth are facing today. Nine out of ten mentors reported a "strong sense of satisfaction in helping a young person."

- ☐ **Individuals were empowered as consumers of the education system and as parents.**

Worksite personnel gained a better understanding of the current educational environment and their ability to impact it. Many confessed that they "were out of touch" with what was going on in high schools. LAMP helped parents in their involvement with their child's educational experience in various ways: as a frame of reference, an example of learning in context, or simply a starting point for a conversation about how their child learns. Ninety percent of mentors who were parents felt that LAMP helped them contribute to the personal and career development of their own children.

- ☐ **LAMP produced significant impacts on individuals' own careers and work life.**

Worksite personnel cited great benefits in the fresh perspectives and enhanced skills they gained as a result of communicating knowledge to students and helping them discover career-related information. Workers reported impacts in four areas: general employability skills; manufacturing skills; interest in training; and morale and productivity

General employability skills. Participation in LAMP improved the general employability skills of employees. Sixty-two percent indicated that LAMP helped them increase their communication skills a great deal, and 65% felt that LAMP enhanced their ability to describe their job and the skills it requires a great deal.

Manufacturing skills. Worksite personnel were called on to convey manufacturing expertise *to* students. Yet many employees learned something new about their own work environment. When asked to what extent LAMP had helped expand their knowledge of manufacturing processes, history, and context, 84% of those responding felt that it had helped "somewhat" or "a great deal." Over half reported that LAMP greatly helped enrich their network of contacts within the UAW and GM.

Interest in training. A significant proportion (42%) of worksite personnel felt that LAMP dramatically increased their interest in further education and training. Moreover, employees who attended conferences on integrated curriculum came back invigorated about the theories and concepts and applied these to both LAMP coursework with youth and adult worker training classes.

Morale and productivity. Worksite personnel indicated that LAMP had a positive impact on their morale and a considerable number experienced a noticeable impact on their day-to-day productivity. One out of four (27%) rated their increase in morale as a dramatic "10" on a scale of 1 to 10. Employees reported they felt good about being able to share information about their job with students who found it interesting.

- ☐ **LAMP helps the UAW and GM develop well-qualified manufacturing workers with a good understanding of the future of the industry.**

Worksite personnel who were involved with LAMP students believed that the students had a good grasp of the industry and would make qualified workers. Seventy-seven percent of respondents thought LAMP "helped develop manufacturing workers with a good understanding of the future of the industry." Students themselves felt they gained a better understanding of unions, GM, and the world of manufacturing and were well-prepared to succeed in a manufacturing career. Employees observed LAMP students gaining a deeper and broader understanding of manufacturing, demonstrating flexibility around team roles, exhibiting knowledge about multiple machines, being less resistant to change, and having a good sense of underlying concepts like quality and system interdependencies that will serve them well in the manufacturing workforce.

- ☐ **LAMP has influenced worksite practices.**

Worksite personnel and others reported changes that were occurring around training the existing workforce. In addition, some believed that LAMP had positive effects on labor-management relations. And finally, individual employees pointed out that LAMP may have changed attitudes, behavior, and practices of the current workforce.

Training. Worksite personnel reported changes in instructional methodology, new approaches to existing classes, and even the possibility of offering large parts of the LAMP curriculum as new classes for existing workers. LAMP has led some worksite personnel to make changes to existing classes. For example, LAMP instructors are working with trainers to modify Health and Safety training to make it easier to learn and more interactive.

Changes in instructional methodology. Worksite trainers indicated that their participation in LAMP has influenced their instructional methods and approaches. LAMP offered the simple but important benefit of allowing trainers the opportunity to observe others' teaching styles and methods and consider the applications. Worksite trainers also reported that they are looking at revising the traditional Basic Problem-Solving class by working with LAMP teachers to make it more activity-based and participatory.

Using the LAMP curriculum. Some worksite personnel are interested in creating a version of LAMP's curriculum geared toward the existing workforce or initial hires. As one UAW-GM representative stated, "We are looking at a spinoff of LAMP-like training for new hires for the plant. We could put existing employees through the training, drawing from the LAMP curriculum in quality, manufacturing, design, and concepts of how it all comes together."

Labor-management relations. Working with LAMP students helped labor-management relations in the workplace by encouraging teamwork, opening lines of communication, and, as one employee put it, "neutralize the tendency toward finger-pointing." Even after LAMP students leave, there appears to be a residual affect whereby employees and managers interact more, communicate more effectively, and contribute more.

Attitudinal and behavioral changes. Working with LAMP and seeing the students in action required the current workforce to pay more attention to standard operating procedures and teamwork. Employees noted that LAMP made the current workforce more aware of and sensitive to diversity, new perspectives, and a "modern" view of their industry. LAMP introduces young people into a workplace where many employees have long tenures, generating a renewed enthusiasm to try new ideas however "off-the-wall" they may seem. Promising student recommendations to improve productivity, reduce waste, and lower costs are in fact being seriously considered for adoption.

EFFECTS ON PUBLIC EDUCATION AND SCHOOL STAFF

The influence of LAMP on participating school districts can be seen beyond the students enrolled. Those touched by the program include administrators and staff at the participating schools, non-LAMP students who are classmates of LAMP students, and traditional classroom teachers creating opportunities to have far-reaching effects on education.

LAMP has increased the awareness and understanding of how partnerships can be powerful tools in restructuring education. For many in the school system, LAMP has confirmed the need to develop partnerships with external organizations as a catalyst for internal change. While focused on manufacturing specifically, observers commented on how the lessons of the LAMP partnership can be applied in other settings.

Some in the educational community have been most impressed by the governance structure of the partnership. The close collaboration between GM and the UAW encouraged the Ingham ISD to include its teacher union in areas of governance and decision-making in ways it had not before. This new collaborative approach was cited as an example of how LAMP had already begun to influence the way business was conducted within the ISD.

LAMP demonstrates how educators can contribute to workforce development while maintaining their historical commitment to academic rigor. LAMP creates a "learning lab" where new ideas and approaches to education can be tried out and modeled. All partners recognize that these students will eventually enter the workforce, whether they pursue higher education immediately after high school or not. Senior school officials have articulated the importance of education contributing more directly to the economic vitality of the area. As one stated, "we perceive LAMP as linked to Lansing's efforts to retain its plants. Lansing needs a strong workforce, so we need to produce good employees and good workers."

Innovative curriculum and instruction. When asked what distinguished LAMP from other educational reforms, school staff point to the integrated curriculum and innovative instructional strategies, and specifically, the curriculum's project-based nature, its emphasis on experiential and contextual learning, and its focus on developing problem-solving skills.

Other educational strategies modeled by LAMP that have captured the attention of key administrators include: cooperative learning (learning in teams), alternative assessment (through student performances and Capstone presentations), and heterogeneous classroom (diverse students in the same classroom). In this section, we examine the specific impacts LAMP is having on the local school system and its personnel.

- ☐ **School staff gained a greater understanding of manufacturing, the UAW, and GM.**

LAMP appears to have been successful in influencing the perceptions and understandings of key educational partners. As one superintendent said, "LAMP has had impact in Ingham, because we are partners at the table." This impact was described as "a very different picture of the workplace, a different perspective on what it takes to work in a workplace with a union. Our understanding has grown significantly." Likewise, worksite personnel gained insight into educational policy and practice.

The ability of LAMP to improve understanding is primarily attributed to the partnership structure. The opportunity to convene and communicate around common goals is key. LAMP's Policy Board meetings have been described as "different cultures getting to know each other, gaining a better understanding of what each other values and needs." The partnership structure provides a platform for true understanding to occur, through close, on-going dialogue, access to each other's environment, and joint decision-making. Worksite personnel rated LAMP's ability to help public school educators understand the changing needs of the manufacturing industry as one of the program's strongest impacts.

- ☐ **LAMP has broadened awareness of manufacturing careers among educational staff.**

One desired impact of LAMP is to raise the visibility and reputation of manufacturing as a career of choice among those who will counsel future graduates. LAMP has begun making progress by adopting contemporary language and highlighting the cutting-edge nature of modern manufacturing for students and staff. The impact has been greatest among counseling staff, who tend to have familiarized themselves with the LAMP initiative more than traditional classroom instructors. These counselors in turn, share practical career information in general and LAMP information in particular, with the students they counsel.

Students were asked if their participation in LAMP was discussed as part of the conversations they had with their guidance counselor about post-graduation plans. Of those who did meet with their counselor senior year, 80% did reference LAMP in those conversations. (Surprisingly, 20% of the students indicated they did not meet with their guidance counselor at all.) Counselors we spoke with indicated that they have gained a new appreciation for manufacturing as a career as a result of LAMP. Other counselors have seized upon the value of the LAMP as an important factor in the college admissions process, talking up the benefits of participation to college recruiters.

To gauge level of awareness concerning LAMP at the home school, students were asked if their teachers knew about their participation in LAMP, both at the beginning and end of the school year. Three quarters (74%) reported that most of their teachers did know about their participation at the beginning of the year. That figure rose slightly to 80% at the end of the year, indicating a fairly high level of awareness among home school teachers. Of those who were aware of their student's participation in LAMP, virtually all of them were characterized as supportive. Also, about half of the Class of 1999 (47%) discussed LAMP with their home school teachers during conversations about their post-graduation plans. We expect this awareness will eventually translate into renewed practice in the traditional classroom.

❑ **LAMP helped administrators meet broader school-to-career and reform goals.**

Many school administrators at the district level have faced the challenge of implementing a school-to-career system for the past several years. To them, LAMP represents one of many potential programs that may help to address the school-to-work transition. Without exception, the opportunity to participate in LAMP is interpreted by these administrators as a valuable learning experience, often modeling the components of a school-to-career system that may eventually permeate the public school system. The elements frequently mentioned include contextual teaching, cooperative (team-based) learning, alternative assessment, and the partnership structure itself. All the administrators interviewed (100%) were able to articulate at least one example of how LAMP was helping them better implement or promote broader school reforms within their particular school setting.

LAMP's alternative assessment strategies, specifically the opportunity for students to demonstrate application of knowledge through the Capstone experience and end-of-unit presentations, have captured the attention of public school administrators. Most recognize these strategies as a useful way of assessing student achievement that realistically reflects how individuals are often judged in the world of work.

The administrators acknowledged that the road to broad implementation of these and other dimensions of LAMP in the traditional classroom will likely be long and rugged. However, it is important to recognize LAMP as a potential catalyst for broad reform. Administrators appreciate the unique approaches to education embedded in LAMP, while at the same time they appreciate how LAMP complements and supports other approaches already in place. As one superintendent summarized, "There are a lot of different pieces in the district. LAMP is a significant component. All these distinct pieces are now starting to align."

More than anything else, participation in LAMP has reminded administrators of the value and need to introduce notions of career development, planning, and guidance into middle school and the earlier grades. Articulation with institutions of higher education is another area that is recognized as needing further exploration. Given the high percentage of LAMP graduates who enroll in Lansing Community College (44% of this year's graduating class), the opportunity to create articulation agreements is an option likely to be pursued by program administrators.

EFFECTS ON PARENTS

One of the most exciting findings to emerge from our study concerns the impact of LAMP on parental involvement in the education of their children. By all accounts, parents of LAMP students appear to be more engaged and involved in their children's education than parents of students in traditional high schools. One hundred percent of the parents reported that they discuss school and participation in LAMP with their child, and about 86% do this regularly or every day. Eighty-eight percent of parents reported that communication with their child about education and career plans has increased quite a bit or more.

Re-engaging parents in the educational enterprise of their children is an issue secondary school educators wrestle with across the nation. LAMP has succeeded in increasing the involvement of parents with high school age children in both their current educational experience and their future decision-making. It is not surprising to hear Lansing area administrators repeatedly comment that "we're really pleased with the support from parents and the opportunity for parental engagement." LAMP, firmly grounded in the world of work, provides a point of reference meaningful to parents, educators, and students alike.

- ☐ **Parents' expectations concerning their child's college and work ambitions became more realistic.**

Choosing an appropriate career path is an important yet sometimes daunting challenge. The vast majority of parents (92%) reported that LAMP helped their child develop realistic college and/or career plans. Further, 94% of the parents whose children were planning to enroll in college reported that LAMP was helpful in making better decisions about college.

From the parental perspective, LAMP provided valuable career development support. When asked to describe the impact LAMP had on their child's education plans, 70% of parents reported that LAMP had a "great" impact with only 10% reporting it had very little influence.

Nine out of ten parents (94%) considered LAMP to have been helpful in their actual decisions concerning educational and training choices. Most parents (82%) characterized LAMP's influence as having been "very helpful" to their child in making career decisions. LAMP created opportunities for parents to become more effectively involved in their child's decision-making. Nearly nine out of ten parents (87%) perceived LAMP as having been "very helpful" to students and their families in making decisions about finding and obtaining a job. Three out of four parents reported that LAMP had a "great" impact on their child's career plans.

☐ **Parents became more involved in their child's education as a result of LAMP.**

During interviews, school administrators commented that LAMP "enhanced the quality of the relationship between parents and the educational experience of their children." Survey data from the parents themselves confirm this observation. One of the ways that LAMP augments parental involvement is to require potential LAMP students to attend the preliminary informational session accompanied by a parent. In nearly half of the cases, both parents attended the initial information session, indicating a high level of family involvement.

During the early phase of the application process, 88% of the parents characterized themselves as at least "considerably" interested in the LAMP program, while 65% described themselves as "extremely" interested. This suggests that parental belief in the value of participation in LAMP played a role in the application decision for a majority of eventual students. Indeed, some students reported that parental influence was one of the main reasons for their application to LAMP.

One of the most significant findings to emerge from the parent survey concerned the influence of LAMP on communication between parent and child. Every single parent (100%) reported that they discussed school and participation in LAMP with their child, and about 86% did this regularly or every day. Eighty-eight percent reported that communication increased "quite a bit" or more with nearly a third reporting that their level of communication increased "a great deal."

Likewise, the LAMP students themselves reported that participation in LAMP increased the level of communication with their parents about future education and career plans. Nearly 60% reported that communication with parents increased "quite a bit" or more.

☐ **Parents reported greater participation in their child's educational decision-making.**

Parental involvement in their child's educational decision-making appears to be strong during the application process and continues through, and possibly beyond, graduation. Parents played a notable role in their child's decision to apply for and participate in LAMP. Over half of the parents claimed to be at least "considerably" influential in their child's decision.

LAMP parents maintained very high attendance rates (86%) at parent/teacher conferences. This reflects a higher level of parental interest and involvement than in traditional school settings. Over three quarters of the parents (78%) were very satisfied with the level of information they received about their child's participation in LAMP. However, only 30% of parents claimed to be "very familiar" with the structure of the LAMP program, and over a third (35%) said they were only "somewhat familiar" with its structure. While this finding is consistent with the assumption that parents are more focused on outcomes than process, it does suggest room for improved communication with parents about how LAMP is conceived and organized.

☐ **Parents developed a better understanding and more positive perception of manufacturing, the UAW, and GM as a result of LAMP.**

As noted earlier, perceptions concerning the manufacturing industry, GM and the UAW, even within the Lansing community, are often ambivalent. Therefore, it is important to note that LAMP has influenced parental opinions of the automotive manufacturing industry. Seven out of ten (69%) LAMP parents reported that their impressions of the UAW and GM had been changed as a result of their experience with LAMP. Of those, 100% reported that their impression improved.

Moreover, 86% of parents reported having a more favorable view towards manufacturing as a career choice for their child as a result of their experience with LAMP. A large majority (63%), characterized their opinion of manufacturing as being "much more favorable."

Parents have responded favorably to the rigor of the integrated work-based curriculum and convey their support of it to school administrators. As one administrator stated, parents have indicated that they "are pleased that their schools are supporting GM." The high level of positive response from parents should help allay fears of educators who are apprehensive about community reaction to anything that is not purely "academic."

E. Implications and recommendations

Learning is not the exclusive province of schools. In addition to schools, families, communities, and workplaces offer valuable learning environments for students. Indeed, all of these are specifically recognized as key partners by the STWOA and their participation is central to successful enactment of the legislation. While appeals to corporate citizenship and the intrinsic satisfaction of improving education may generate initial interest and support, long-term participation and commitment will likely depend upon empirical demonstration of more immediate and tangible returns.

This study documents an array of impacts that accrue to the partnering organizations of a complex STC initiative. Specific and unique benefits valued by the respective partners were identified, suggesting that each can expect to obtain more from participation than intrinsic satisfaction. While congruent with recent research which has found a positive return on investment for employers, the findings from this study suggest positive results for school staff and parents as well.

Program sponsors and policy makers can use this information to bolster partnership development strategies by confidently appealing to enlightened self-interest. In turn, partners can defend their decisions to enter into partnerships with education on the basis of rational cost-benefit analyses.

While not examined in detail in this paper, it is worth noting that the rate of return enjoyed by an organization appears to be directly related to its level of investment. In contrast to many STC initiatives where industry plays a symbolic and therefore less active role, the employer partners in LAMP have made deep and genuine commitments to the program. Workplace staff have made significant contributions to all aspects of the initiative. In turn, substantial dividends to the workplace have begun to accrue.

Likewise, among the educational partners, the degree of involvement varied across the 20 individual schools that are participating in the LAMP initiative. Those that are more actively involved in the partnership have tended to experience greater gains. The same seems to hold true for parents and families. Thus, it would behoove partners to heed the old adage that they are likely to get out in proportion to what they put in.

While students are clearly experiencing positive educational and developmental gains through a challenging integrated curriculum, work-based learning experiences, increased access to adults and mentors, and improved communication with parents, the effects of participation in STC appear to extend beyond the success of the students.

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GLOBAL HUMAN RESOURCE DEVELOPMENT: CULTURAL INFLUENCES ON THE DELIVERY OF EXECUTIVE DEVELOPMENT PROGRAMS

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ABSTRACT

The pressures of global economic development and competition, innovative technology, and the diversity of the workforce demand that corporations around the world reassess existing paradigms and approaches used to conduct training and development in business and industry. In an effort to remain highly competitive in the global and local marketplaces, the role and visionary leadership of corporate executives wide have become significant factors in appropriately adapting and responding to the change in the internal and external business environment. Hence, as we move into the twenty-first century, the investment in executive development becomes increasingly important. The purpose of this paper is to investigate cultural influences on the selection and appropriateness of training topics and methods for the delivery of executive development programs in five international regions: the Untied States, Asia, and Western Europe, the United Kingdom, and Mexico/Central/South America. This paper is intended to provide relevant information regarding the training topics and methods for delivery of executive development programs provided by US-based consulting organizations.

INTRODUCTION AND RELATED LITERATURE

As we enter the Age of Globalization, corporations strive to become competitive globally and to succeed locally. Human resource development becomes a critical factor in reaching long range goals (Marquardt & Engel, 1993). However, fulfilling competitive success through manpower development requires that organizations are willing to adapt traditional behaviors and group dynamics. In an effort to remain highly competitive in the global and local marketplaces, the role and visionary leadership of corporate executives worldwide have become significant factors in appropriately adapting and responding to the change in the internal and external business environment. Bardach (1997) commented that "the demand for executive education continues to be strong, as organizations become increasingly aware that competitive advantages reside in their leadership, intellectual capital, and organizational effectiveness" (p. 25). According to Vicere (1991), executive development appears to have an important role "as a tool for promoting organizational change and transformation" (p. 44).

The mission of executive education is to "develop the organization's leaders, so that the strategic development of the whole company follows" (Wertz, 1996, pp. 622-623). The primary goal of executive development programs is to assist executives with the knowledge, skills, and attitudes needed to effectively develop and manage their organizations and to produce a measurable desired outcome (Ochs, 1995). Hence, as we move into the twenty-first century, the "investment in executive resources is critical to survival and combativeness" (Moulton, 1990, p. 7). The need for a new paradigm in executive development has been recognized, investigated, explored and implemented in selected corporations (Vicere & Graham, 1990; Vicere, Taylor & Freeman, 1994). Two important dimensions of such a new paradigm are awareness of technological changes and sensitivity to cultural differences.

Based upon the current literature, the most common areas of executive development programs are general management, leadership, and personal development. Topics such as strategy, global business awareness and environment, finance and accounting, and new technology have received increased attention as businesses expand into the global marketplace. In 1993, Moulton and Fickel further explained that the focus of executive development programs is primarily toward "business strategy, the external environment of business; and the internal environment of business, including the major functional disciplines and organizational behaviors" (p. 105). At the same time, Wertz (1996) emphasized that topics of executive programs must "come from the strategic needs of the business" (p. 624).

Knowles (1980), an influential scholar in adult education, explained the concept of andragogy which encompassed important assumptions about the characteristics of adult learners. These assumptions included the ideas that adult learners tend to be "self-directed" (p. 43), "attach more meaning to learning they gain from experience than those they acquire passively" (p. 44), get ready to learn as "they experience a need to learn", and perceive that education is "a process of developing increased competence to achieve their full potential in life" (p. 44). Therefore, many training methods have been developed to facilitate learning for adults. Examples of such include action learning, case studies, lecture, discussion, role playing, and simulation, all of which have been discussed in the literature on executive training. Combinations of training methods have been encouraged because there is no single best method to teach executives. Significantly, selecting appropriate training methods during curriculum development and implementation plays an important role in obtaining desired outcomes. Wentling (1993) addressed two major considerations in selecting training methods. They were to provide the trainee with a provision and confirmation of a means to learn the specific content identified, and a continuation of interests and involvement in the training to enhance learning.

However, before program designers select an appropriate training method, they need to consider selected criteria, including organizational needs and objectives, learners' needs and characteristics, instructional objectives, resources, facilities, space, time, cost, budgets, and class. Also, in order to decide which method is the most effective, Vaught, Hoy and Buchnan (1985) further suggested that each method needs to be evaluated on the basis of six training objectives including (a) knowledge acquisition, (b) changing attitudes, (c) problem-solving skills, (d) interpersonal skills, (e) participant acceptance, and (f) knowledge retention. Thus, using these considerations, program designers or trainers can be more objective about selecting the most appropriate and effective training method for their audience.

"As technology changes the way we work and communicate, it also changes how we learn" (Marquardt, 1996, p. 56). Advances in technology will revolutionize how training and development is delivered (Bassi, Benson, & Cheney, 1996; Touger, 1998). At the same time, culture is a major factor affecting global human resource development. Cultural differences affect the employees' work-related values, beliefs, and behaviors within each country (Hofstede, 1984). Culture is "not peripheral to business-it's central to business" (Guptara, Murray, Razak, & Sheehan, 1990, p. 13).

Consequently, from the curriculum design and development perspective, various cultural backgrounds and learning styles should be given careful consideration. Making appropriate and effective matches among training topics, training delivery options, training methods, learning styles, and instructional objectives should increase the positive return on investment for corporations in terms of employees' performance, productivity, satisfaction and growth, and corporate profitability and expansion.

PURPOSE OF STUDY

The purpose of this study was to investigate cultural influences on the selection and appropriateness of training topics and methods for delivery of executive development programs among selected countries including: the Untied States, Asia, Western Europe, the United Kingdom, and Mexico/Central/South America. Specifically, the study was designed to ascertain if trainers with international experience rated the selection of topics, delivery options, and training methods significantly different for executives in different countries.

METHODS

To frame this study, three research questions were developed. The purposive sample for this study consisted of 124 consulting organizations based in the United States with experience in conducting executive development programs in the United States and in at least one other country. The study participants, were identified by the following positions: owner, CEO or president, director or manager, or independent consultant.

While the target population would have ideally been all training consulting organizations working in more than one country, two sources were used to identify a potential accessible population for the study. They were the Consultant and Consulting Organizations Directory (Burton III, 1998) and ASTD's Guide & Consultant Directory published by the American Society for Training and Development (1998). The purposive sample of 124 participants was obtained by calling the firms listed in these guides to verify that they had consulting experience in the United States and another country and to obtain their permission to participate in the study.

The procedures for this study included the development of a written instrument which was evaluated by a panel of experts for content validity and readability during a pilot study. The instrument contained 32 items and used a seven-point Likert-type scale of 1=strongly disagree to 7=strongly agree. The instrument was submitted to a panel of seven experts for evaluation for validity and readability. The instrument was modified based on the suggestions of the panel and then mailed to the participants who agreed to participate when contacted by a phone call. Two follow-up phone calls were also made to those that failed to respond to the initial mailing. After the data were received and entered, descriptive statistics were calculated and ANOVA was used to test the null hypotheses. When appropriate the Tukey post hoc test was used.

FINDINGS

On March 31, 1999, 114 instruments were mailed to the study participants who indicated interest in participating in this study. Of 124 (100.0%) mailed instruments, including 10 from the pilot test, 20 (16.1%) were not returned and 104 (83.9%) were returned by the end of May 21, 1999. Of the 104 (100.0%) returned responses, including seven from the pilot test, 69 (66.3%) were found to be usable. More specifically, for the 35 instruments not providing data, 25 respondents indicated that they lacked the type of knowledge this study required; six indicated that they were too busy to complete it during the designated period of time; and four responded that they were not interested after they looked at instrument. Of the 69 (100.0%) usable responses, 52 (75.4%) were counted as early responses and 17 (24.6%) were counted as late responses. A t-test revealed no significant differences at the .05 level between early and late respondent groups on the instrument. All but three participants had over five years experience in HRD consulting and 60% had experience in six or more different countries. Collectively participants had experience in a total of 183 countries and 40 different countries were designated for data comparison purposes. The 40 countries were grouped into five regions: the United States, Asia, Western Europe, the United Kingdom, and Mexico/Central/South America.

Based on the total group means, the five highest rated items with regard to training topics were general management, interpersonal skills (e.g., leadership/communication), business planning, computer and information systems, and organizational change and group dynamics. Table 1 presents the mean scores and standard deviations for these training topics for the five geographic regions. Two items received lower ratings, including research and development and business ethics. Also, based on the total group means, the five highest rated items with regard to training methods were discussion, action learning, case study, demonstration, and simulation. One item, sensitivity training/T-group, received the lowest rating.

Table 1
Means and Standard Deviations of Five Highest Rated Training Topics by Geographic Region

Five highest rated topics by total group	United States n=58		Asia n=27		Western Europe n=16		United Kingdom n=19		Mexico/ S.Amer n=15	
	M	SD	M	SD	M	SD	M	SD	M	SD
General management	5.29	1.2	5.89	1.2	4.81	1.3	5.42	1.2	5.14	1.4
Interpersonal skills	5.56	1.4	5.71	1.4	4.50	1.5	5.00	1.9	4.44	1.7
Business planning	5.43	1.3	5.11	1.3	4.94	1.1	5.16	1.4	4.80	1.0
Computer & info systems	4.98	1.9	5.37	1.6	4.44	1.9	4.44	2.3	5.00	1.7
Organization change	5.22	1.3	4.41	1.5	4.58	1.4	4.65	1.6	3.73	1.8

The results of the analysis for training topics revealed that eight significant differences existed between groups at the .05 level among 160 possible combinations. They differed as follows:(a) business ethics was rated higher for the United States than for Asia and the United Kingdom (F=3.28; p=.014), (b) corporate strategy was rated higher for the United States than Asia (F=3.11; p=.017), (c) customer service was rated higher for the United States than for the United Kingdom (F=2.86; p=.026), (d) economics and finance was rated higher for Asia than the United Kingdom (F=2.46; p=.049), (e) general management was rated higher for Asia than for Western Europe (F=2.72; p=.032), (f) interpersonal skill was rated higher for Asia than for Western Europe (F=2.88; p=.025), (g) organizational change was rated higher for the United States than for Asia and Mexico/Central/South America (F=4.72; p=.001), and (h) personal development was rated higher for the United States than the United Kingdom (F=2.87; p=.025).

Based on the total group responses, the five highest rated training methods were discussion, case study, action learning, demonstration, and simulation. Table 2 presents the means and stand deviations for these methods by geographic region. The results of the analysis for delivery options revealed that two significant differences existed between groups at the .05 level among the 40 possible combinations. Both computer-based/web-based training (F=2.98; p=.021) and distance training (F=3.26; p=.014) were rated higher for the United States than for Mexico/Central/South America.

Table 2

Means and Standard Deviations for Highest Rated Training Methods by Geographic Region

Five highest rated methods	United States n=58		Asia n=27		Western Europe n=16		United Kingdom n=19		Mexico/ S. America n=15	
	M	SD	M	SD	M	SD	M	SD	M	SD
Discussion	5.89	1.0	5.38	1.1	6.00	1.0	5.42	1.4	5.71	1.6
Case study	5.08	1.5	5.85	1.0	5.39	1.1	5.57	1.1	5.20	1.3
Action learning	5.88	1.0	5.26	1.4	5.05	1.6	5.84	1.1	4.57	1.2
Demonstrate	5.44	1.2	5.81	1.2	5.15	1.3	4.90	1.3	5.27	1.5
Simulation	5.49	1.2	5.61	1.2	5.00	1.2	5.62	1.0	4.87	1.3

The results of the analysis for training methods revealed that two significant differences existed between groups at the .05 level among the 110 possible combinations. They differed as follows: (a) action learning was rated higher for the United States and the United Kingdom than for Mexico/Central/South America (F=4.46; p=.002) and lecture was rated higher for Asia than for the United States (F=4.26; p=.003).

Therefore, it was concluded that cultural differences do, to some extent, influence the selection of training topics used for corporate customers among different international regions and that training delivery options and methods should also be selected to fit the needs of the region.

DISCUSSION

Since this was an exploratory study, the content is broad and intended to provide foundational knowledge for the delivery of executive development programs. This study received a high response rate (83.9%). The study participants were cooperative and experienced with the topic.

The five training topics most frequently selected by the total group were general management, interpersonal skills (e.g., leadership/communication), business planning, computer and information systems, and organizational change and group dynamics. In contrast, topics such as business ethics and research and development management were less often selected in most regions. The five training methods considered to be most appropriate to be used by the total group were discussion, case study, action learning, demonstration, and simulation. In contrast, sensitivity training/T-group was considered less appropriate in ten regions.

These data suggest that most respondents perceived that their corporate customers are flexible in terms of the selection of training topics. However, from these findings, we can note that cultural differences seem to influence the selection of topics such as business ethics and research and development. At the same time, methods that incorporate a learning by doing approach were most often preferred. Methods such as discussion, case studies, action learning, demonstration, and simulation were considered appropriate. The characteristics of these methods are more learner-centered approaches that stimulate learners' critical thinking skills, problem-solving skills, and decision-making skills. The results of these findings are consistent with the current literature.

IMPLICATIONS AND RECOMMENDATIONS

In an effort to remain highly competitive in the global and local marketplaces, the need of executive education becomes important in order for corporate executives to continue to update the needed knowledge and skills to appropriately adapt and respond to the change in the internal and external business environment. As a result, this study provides a basis for making culturally sensitive decisions with regard to the selection of training topics and methods of executive development programs worldwide. Hence, as businesses expand from the local to the global marketplace, both global trainers, who conduct training, and business and industry CEOs and senior-level executives, who might attend training, need to be aware of the importance of culturally sensitive individualized or customized training programs and approaches.

Global trainers or program designers need to be more sensitive to using appropriate and effective combinations of training topics and methods when they conduct global executive development programs. As the demand for executive education continues, taking American or any particular country's ideas into other countries without taking cultural differences into consideration can not be truly beneficial to the corporate customer. Therefore, various cultural backgrounds and corporate cultures should be given serious consideration in order for corporate customers to receive the most positive return on their investment in training.

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Website Abstract

GLOBAL HUMAN RESOURCE DEVELOPMENT: CULTURAL INFLUENCES ON THE DELIVERY OF EXECUTIVE DEVELOPMENT PROGRAMS

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ABSTRACT

The pressures of global economic development and competition, innovative technology, and the diversity of the workforce demand that corporations around the world reassess existing paradigms and approaches used to conduct training and development in business and industry. In an effort to remain highly competitive in the global and local marketplaces, the role and visionary leadership of corporate executives wide have become significant factors in appropriately adapting and responding to the change in the internal and external business environment. Hence, as we move into the twenty-first century, the investment in executive development becomes increasingly important. The purpose of this study was to investigate cultural influences on the selection and appropriateness of training topics and methods for the delivery of executive development programs in five international regions: the Untied States, Asia, and Western Europe, the United Kingdom, and Mexico/Central/South America. The data suggested that most respondents perceived that their corporate customers are flexible in terms of the selection of training topics. However, from these findings, we can note that cultural differences seem to influence the selections of topics such as business ethics and research and development. At the same time, methods that incorporate a learning by doing approach were most often preferred. Methods such as discussion, case studies, action learning, demonstration, and simulation were considered appropriate. The characteristics of these

methods are more learner-centered approaches that tend to stimulate learners' critical thinking skills, problem-solving skills, and decision-making skills. The results of these findings are consistent with the current literature. This paper is intended to provide relevant information provided by US-based consulting organizations regarding the selection of training topics and methods for delivery of executive development programs in different geographic regions of the world.

Teachers in the Future:
Retaining Secondary Business and Marketing Education Teachers

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Abstract

Follow-up studies of business education in the United States continues to be a primary focus of research providing valuable information on the supply and demand for business education teachers (Curran, 1996; LaBonty, 1999; McEntee, 1997; and O'Neil, 1993). In addition, research efforts have focused on job satisfaction and professional development opportunities for teachers (Gades & Everett, 1992; Mullennex, 1996; and Schafer & Echternacht, 1992). Studies conducted in 1987 (Hopkins) and 1992 (Gades & Everett) noted business education graduates were not entering the teaching profession. The U.S. Department of Education, National Center for Education Statistics (NCES) estimates 42% of the nation's teachers (about 2 million) will retire or leave teaching in the next decade ("Baby Boomers," 2000). It is therefore, timely to conduct a study to identify factors impacting the turnover and retention of secondary business and marketing education teachers. In order to develop and retain the high quality of secondary business and marketing education teachers, an understanding of the factors associated with teacher turnover and retention is critical.

Literature Review

Teacher Supply and Demand

Follow-up studies of secondary career and technical education teachers in the United States have provided valuable information on supply and demand (Camp, Case, Dean, & Fannon, 1998; Curran, 1996; Gonzales, 1998; Jackman & Rehm, 1994; LaBonty, 1999; McEntee, 1997; Miller & Meszaros, 1996; and O'Neil, 1993). Boesel and McFarland (1994) indicated a 9% decline of vocational teachers in the nation's secondary schools since 1987-88. Studies conducted in 1987 (Hopkins) and 1992 (Gades & Everett) noted business education graduates were not entering the teaching profession. When asked why they were not teaching respondents indicated they couldn't find a teaching position. Recent research (LaBonty, 1999) indicated there is a shortage of business education teachers to meet the demand needed across the United States. Business teachers exceed the supply from 8% in 1991-1992 to 64% in 1997-1998. In Minnesota, business education teacher vacancies/hires in 1999-2000 identified 69 vacancies in business education not filled when school started in the fall 1999 (Yussen, Browning, & Colby, 1999). Research conducted by Ruhland)1995/1996) indicated e a surplus of marketing education teachers in the United States.

According to Lynch (1996) "less than fifty percent survive longer than 5 years in the classroom". New teachers will encounter some problems. Mentoring programs, assistance from colleagues, time to plan and reflect with colleagues, in-service education, and help with teaching materials and student learning are often cited as areas of imperative assistance for beginning teachers (p. 20). A good mentoring program can provide a first year teacher the opportunity to work with an experienced teacher who can share both teaching strategies and ideas to assist with classroom discipline issues. Lynch (1997) recommended an increase in the supply and academic quality of those entering the teaching force.

> This is especially critical in vocational education, where the enrollment decline in teacher education has been so steep and where so many in the teaching force lack the academic credentials of their professional colleagues in the public schools, technical institutes, and community colleges" (p. 61).

Teacher Turnover and Retention

Numerous research studies have been conducted to identify which teachers leave the teaching profession and why (Bobbit, et al., 1994: Chapman & Green, 1986; Chapman & Hutcheson, 1982; Grissmer & Kirby, 1997; Murnane et al., 1991; and Schlecty & Vance, 1983). Findings from these studies show a relationship between teacher turnover and teacher characteristics. Research conducted by Ingersoll (1999) has identified further implications related to the issue of teacher turnover. "Fully understanding turnover requires examining the social organization of the schools in which turnover and staffing problems are embedded and examining turnover at the level of the organization" (p. 25). Teacher turnover is a significant issue and needs to be addressed from a school's organization structure and overall effectiveness.

High school teachers have identified job-related stress as a reason for leaving the teaching profession (Farber, 1984; Osborne, 1992: and Terry, 1997). A recent study by Adams, Heath-Camp and Camp (1999) examined the relationship between educational system stressors and stress in vocational education. Findings from this study support the need to look at teacher turnover and retention. Four key recommendations were made as a result of this study. Leaders within educational systems need to be sure that teachers understand their teaching role. Clarifying the teacher's role can eliminate the confusion and anxiety teacher's encounter. A second recommendation was to reduce the additional tasks performed by teachers. This included completing unnecessary paperwork and attending meetings outside of normal working hours. Developing and endorsing a mentoring program for teachers was the third recommendation. Providing vocational teachers with the resources they needed to perform their job was the fourth recommendation. Helping to reduce stress in the teaching environment might be one way to retain teachers in the profession.

The literature review identifies no studies specifically addressing the turnover and retention of secondary business and marketing education teachers. Studies have been conducted related to retention of agriculture vocational education teachers (Cole, 1983; Knight & Bender, 1978; Miller 1974 and Reilly & Nelson, 1979). Findings varied from the studies with common turnover factors to include personal characteristics, student concerns, workload, and salary. A study conducted in Minnesota by the Center for Rural Policy and Development (Shah, 1999) indicated that 57% of the principals rated the teachers who had left the profession for reasons other than retirement, were "effective" or "highly effective" in the classroom.

Turnover is defined as the degree of individual movement within a social system (Price, 1977). Social systems include schools. Turnover focuses on the individual, not the movement of organizations. Retention is defined as those teachers who stay in the profession (Grady & Figueira, 1987). Their research recommendations include the study of personal characteristics, job and career satisfaction, and behavioral intent to determine why vocational teachers leave the profession.

Few models or theories to explain teacher's decisions to leave or remain in teaching have been developed. Data is collected by the U. S. Department of Education, National Center for Education Statistics (NCES) using the Schools and Staffing Survey (SASS). Data from the 1993-94 SASS analyzed four clusters of variables: school characteristics, teacher background, workplace conditions, and teacher compensation (U. S. Department of Education, 1997a). Findings from this study identified 11% of the vocational/technical education teachers in public schools indicated they were not satisfied with their teaching experience (p. 38). In addition 20% of public school leavers and 28% of private school leavers left because they wanted to pursue other career opportunities, they were dissatisfied with the profession, or because they desired better salaries or benefits (p. 4). Leaver is defined as those teachers who left the teaching profession after the 1993-94 school year (U. S. Department of Education, 1997b).

Theoretical Framework

Various models and theories have been identified to serve as a foundation to studying teacher turnover and retention. Holland's (1973) theory of vocational choice posits that vocational satisfaction, stability, and achievement depend on the congruence between one's personality and environment in which one works. Teachers who rate themselves higher in skills and abilities, values, and professional accomplishments should exhibit more satisfaction with their career. A work environment where these factors are supported can greatly impact their decision to stay or leave the teaching profession. Their reasons for career changes may be related to changes in personality, environment, or overall perception of what is involved in teaching.

Krumboltz' (1979) social learning theory of career decision-making identified three key factors that influence the nature of career decision. These factors included genetic endowments, environmental influences, and learning experiences. The basis for this theory is the need to understand one's educational and occupational preference and how that impacts selection of an occupation. Most educational and occupational decisions are influenced by factors outside our control. Genetic endowments include race, gender, and physical appearance and characteristics. Environmental influences include social, cultural, political or economic influences. Any direct effect produced by one's action is part of our learning experiences. An understanding of these factors can help answer the question why individuals change occupations throughout their lives.

Expanding on Krumboltz' social learning theory, Chapman developed a model associated with teacher retention/attrition (Chapman, 1983; Chapman, 1984; and Chapman & Green 1986). This model offers a specific application to decisions made about teaching careers. The model suggested that teacher retention is a function of (a) teachers' personal characteristics, (b) educational preparation, (c) initial commitment to teaching, (d) quality of first teaching experience, (e) professional and social integration into teaching, and (f) external influences. These six factors influence career satisfaction, which relate to a teacher's decision to remain in or leave teaching. The model was designed for public school teachers' decision to remain or leave teaching. Chapman tested his model of influences associated with teacher attrition in 1984 by surveying graduates who were recipients of a teaching certificate from the University of Michigan (Chapman, 1984, p. 646). Findings from this study supported his model of teacher attrition. It is this model that forms the theoretical framework for this study.

Purpose and Research Questions

The purpose of this study was to identify factors that impact the turnover and retention of secondary business and marketing education teachers. In addition, a second purpose was to identify the skills teachers possess and factors that determine a teacher's willingness to continue teaching. The following research questions guided this study:

1. Is there a statistically significant relationship between business and marketing leavers and stayers and level of commitment to teach?
2. Is there a statistically significant relationship between business and marketing leavers and stayers and rating of first year of teaching experience?
3. What factors impact a secondary business and marketing education teacher's decision to leave the teaching profession?
4. Is there a statistically significant relationship between business and marketing leavers and stayers and ratings of skill level?
5. Is there a statistically significant relationship between business and marketing leavers and stayers and ratings of characteristics related to their willingness to continue teaching?

Methodology

The survey developed for this study employed items used in earlier studies (Chapman & Hutchenson, 1982; and Miller, 1974). The survey consisted of five sections: (a) educational preparation, (b) teaching experience, (c) skills and abilities, (d) institutional factors, and (e) demographics. Four types of question structures used included open-ended, close-ended with ordered choices, close-ended with unordered response choices, and partially close-ended (Dillman, 1978). Each of the questions asked in the survey fit into one of the four categories. The open-ended question asked participants to identify their professional goals for the next 5 and 10 years.

To validate the survey, teacher educators of business and marketing teacher education programs were selected. Teachers reviewing the survey were from institutions offering degrees or licensures in business and marketing teacher education (i.e. bachelor's, fifth-year program, master's, or doctoral degrees.). In addition the Office of Measurement Services at the University of Minnesota reviewed the survey providing additions, deletions and recommendations on the format of the survey. These experts were asked to make recommendations for improving, adding, or deleting any statements.

The population for this study was undergraduate and post-baccalaureate students who obtained a standard teacher license in business and marketing education between 1995 and 1999 at the University of Minnesota. The list of graduates was obtained from the Director of Student and Professional Services in the College of Education and Human Development. Seventy-one participants represented graduates from business and marketing education.

The initial mailing was sent in February 2000, with follow-up mailings in March and April 2000. Eleven (15%) surveys were returned non-deliverable, and an attempt was made to locate a current mailing address. If a more current address was available, the survey was sent a second time. Phone numbers were not available for the participants, so telephone follow-ups were not possible. A total of 17 (24%) useable surveys were received by June 2000. Four (24%) of those responding indicated they were no longer teaching (leavers).

Both descriptive and inferential statistics were used to analyze data using SPSS 10.0 software (SPSS Inc., 1999). Data analysis determined whether the two groups (teachers who were stayers or leavers) differ in their reasons to remain in teaching (Borg & Gall, 1989). Significance was tested using Pearson's chi-square to identify differences between respondents who are still teaching (stayers) and those who have left (leavers) the teaching profession. The .05 level was used to determine statistical independence and any areas of differences.

Findings

Demographically, 12 (71%) of the participants were female and 5 (29%) were male. More than half of the population was between 31 and 50 years of age (77%), and 100% were white, non-hispanic. Educational level attained included 12% had a bachelor's degree, and 88% had completed a master's degree. Of the participants responding, 82% had five years or less non-teaching experience. Ten (59%) of the participants had completed business and marketing courses when they were a high school student.

Level of Commitment to Teach

Research question 1 asked, "Is there a statistically significant relationship between business and marketing leavers and stayers and level of commitment to teach?" Nine (53%) of the participants were extremely committed to teaching after completing their degree or certification requirements. There was a strong relationship (p = .002) between leavers and stayers and level of commitment to teach.

Rating of First Year Teaching Experience

Research question 2 asked, "Is there a statistically significant relationship between business and marketing leavers and stayers and rating of first year of teaching experience? Seven (41%) participants rated their first year of teaching as positive, followed by extremely positive (23%), and very positive (18%). The rating level for first year teaching showed no relationship (p = .331) between business and marketing leavers and stayers.

Factors Impacting Decision to Leave Teaching

Four (24%) of those responding indicated they were no longer teaching (leavers). Of those leavers responding, 3 (75%) had taught less than three years. Research question 3 asked, "What factors impact a secondary business and marketing education teacher's decision to leave the teaching profession?" The reasons selected by at least one participant included classroom management issues, job related stress, perceived limit on salaries, program/teaching position ended, decided teaching wasn't for me, licensure requirements, and institutional climate. Two additional reasons added by participants included needed a greater challenge and left teaching to pursue a graduate degree.

Rating of Skill Level

Research question 4 asked, "Is there a statistically significant relationship between business and marketing leavers and stayers and ratings of skill level?" Participants were asked to rate their current skill level using a Likert-type scale of 1 to 5 representing these levels: 1 = "very poor/nonexistent," 2 = "poor," 3 = "fair," 4 = "good," 5 = "excellent." Participants ranked oral communications (M 4.53) and function within a team environment (M 4.53) as their highest skill level. This was followed by written communications (M 4.41) and persuasion of others to accept your ideas (M 4.35). The skill with the lowest rating was knowledge of teaching methodologies (M 3.47). One skill showed a strong relationship between business and marketing stayers and leavers, and practical experience in teaching area (p = .025). Table 1 illustrates the rating of skill level.

Factors Important to Continue Teaching

Research question 5 asked, "Is there a statistically significant relationship between business and marketing leavers and stayers and ratings of characteristics related to their willingness to continue teaching?" Participants were asked to rate each item as to its importance in determining their willingness to continue teaching. They were to respond on a Likert-type scale of 1 – 4 representing these levels: 1 = "not important," 2 = "somewhat important," 3 = "very important," 4 = "extremely important." Participants ranked inner sense of knowing I'm doing a good job (M 3.73) as the most important factor as to their willingness to continue teaching. Positive teaching experience (M 3.60) and recognition by students (M 3.33) was ranked second and third. The factor least important in determining a teacher's willingness to continue teaching was availability of induction/mentoring program (M 2.07). Factored out one by one, there was one factor that showed a strong relationship between business and marketing leavers and stayers. Recognition by supervisors and administrators (p = .026) was significant. Table 2 illustrates factors important to continue teaching.

Table 1
Rating of Skill Level (N=17).

Skills	M	Chi- Square	df	P
Oral communication skills	4.53	.018	1	.893
Function within a team environment	4.53	.018	1	.893
Written communication skills	4.41	.565	1	.452
Persuasion of others to accept your ideas	4.35	.415	2	.813
Organization and planning	4.29	1.253	2	.534
Supervision and leadership	4.29	.049	1	.825
Integrate technology into the curriculum	4.18	.327	2	.849
Evaluation of ideas and presentations	4.12	3.890	2	.143
Involvement with long-term projects	4.12	2.348	2	.309
Development of new approaches to problems	4.06	.234	2	.889
Conflict resolution	4.06	.234	2	.889
Practical experience in teaching area	3.94	9.358	3	.025*
Knowledge of curriculum development	3.76	5.468	3	.141
Knowledge of teaching methodologies	3.47	4.120	2	.127

Note. *Significant at the .05 level.

Participants were asked to identify their professional goals for the next 5 and 10 years. Goals reported for the next 5 years included develop and update curriculum (24%), and pursue/complete master's degree, improve teaching skills, and integrate technology into the curriculum at 12% each. A common goal for the next 10 years was to obtain an administrative position (24%) as the most frequent responses.

Conclusions

Based upon the findings from this study, the following conclusions were drawn:

1. There is no significant difference between business and marketing leavers and stayers and their commitment to teach after completing their degree requirements. Participants were extremely committed to teaching. Various factors contributed to reasons teachers left the teaching profession. Classroom management issues, job related stress, decided teaching wasn't for me, licensure requirements, and institutional climate were cited most often.

2. There is no significant difference between leavers and stayers and rating of first-year teaching experience. Seven (41%) of the participants rated their experience as

positive, four (24%) participants rated their first-year teaching experience as extremely positive, and three (18%) of the participants rated their first-year experience as positive.

Table 2
Factors Important to Continue Teaching (N=17).

Factors	M	Chi-Square	df	P
Inner sense of knowing I'm doing a good job	3.73	.642	1	.423
Positive teaching experience	3.60	.721	2	.697
Recognition by students	3.33	3.462	2	.177
Adequate time to complete job responsibilities	3.27	.875	3	.831
Pleasant working conditions	3.20	2.637	3	.451
Potential for salary advances	3.13	2.308	2	.315
Administrative support for program development	3.13	2.637	2	.267
Quality and quantity of resource available	3.00	.598	3	.897
Chance to contribute to important decisions	3.00	1.436	2	.488
Professional development opportunities	2.93	1.587	3	.662
Recognition by supervisors/administrators	2.93	9.231	3	.026*
Leadership opportunities	2.93	.865	2	.649
Perception of job security	2.73	2.637	3	.451
Recognition by peers	2.67	6.346	3	.096
Currency in cooperative learning techniques	2.47	2.981	2	.225
Participation in professional associations	2.40	2.308	3	.511
Approval of family and/or close friends	2.33	2.637	3	.451
Availability of induction/mentoring program	2.07	1.813	3	.612

Note. *Significant at the .05 level.

3. Teacher's overall rating of the 13 skills was a mean score of 3.47 or higher. Findings indicate that teachers felt their skill level was on an average good, with the highest skill level identified as oral communication (M = 4.53), followed by function within a team environment (M = 4.53).

4. Teachers identified the most important factor contributing to their willingness to continue teaching to be "inner sense of knowing I'm doing a good job" (M = 3.73). This finding supports Holland's (1973) theory of vocational choice in that teachers who rate themselves higher in abilities, values and professional accomplishments exhibit more satisfaction with their career choice.

5. A teacher's work environment can impact their decision to stay or leave the teaching profession (Holland, 1973). Findings from this study reported the following factors as important to a teacher's willingness to continue teaching (a) positive teaching experience (M = 3.60); (b) adequate time to complete job responsibilities (M = 3.27); (c)

pleasant working conditions, (M = 3.20; and (d) administrative support for program development, (M = 3.13). These four factors were rated 7 or higher out of 18 factors.

Recommendations

1. To validate the findings from this research, replication of this study should be conducted to include representation of business and marketing education teachers from secondary schools across the United States. This will ensure a more representative sample and determine if similar findings are reached.

2. Further research should be conducted over the long-range impact of turnover and retention of secondary business and marketing teachers. As teachers progress in the number of years teaching, do reasons identified for leaving the teaching profession change or stay the same?

3. Knowledge of teaching methodologies (M = 3.47) had the lowest skill rating. Seven (41%) of the 17 participants rated this skill as fair. Further research should be conducted to better understand the teaching methodologies used and why teachers rate their skill level based upon criteria provided.

4. Recent literature has indicated the importance of induction or mentoring programs for new faculty (Lynch, 1996; Kirby & LeBude, 1998). Further research needs to be conducted to determine its importance with secondary business and marketing education new teachers. Participants from this study ranked availability of induction/mentoring program17 out of 18 as a factor important to continue teaching, with a mean score of 2.07 on a scale of 4.0.

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